MDX-C8970

SERVICE MANUAL

US Model

Model Name Using Similar Mechanism	MDX-C7970
Base Mechanism Type	MG-164NF-138
Optical Pick-Up Name	KMS-241B/J1NP

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION
19 watts per channel minimum continuous average power into 4 ohms, 4 channels driven from 20 Hz to 20 kHz with no more than 1% total harmonic distortion.

Other specifications

MD player section

Signal-to-noise ratio	93 dB
Frequency response	10 – 20,000 Hz
Wow and flutter	Below measurable limit
Laser Diode Properties	
Material	GaAlAs
Wavelength	780 nm
Emission Duration	Continuous
Laser output power	Less than 44.6 W*

** This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.*

Tuner section

FM

Tuning range	87.5 – 107.9 MHz
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz
Usable sensitivity	8 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	65 dB (stereo), 68 dB (mono)
Harmonic distortion at 1 kHz	0.7 % (stereo), 0.4 % (mono)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz

AM

Tuning range	530 – 1,710 kHz
Antenna terminal	External antenna connector
Intermediate frequency	10.71 MHz/450 kHz
Sensitivity	30 µV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	45 W × 4 (at 4 ohms)

General

Outputs	Line outputs (3) Power antenna relay control lead Power amplifier control lead Telephone ATT control lead Illumination control lead
Equalizer	±12 dB; fo = 62 Hz, 157 Hz, 396 Hz, 1.0 kHz, 2.51 kHz, 6.34 kHz, 16 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 178 × 50 × 182 mm ($7\ ^1/_8 \times 2 \times 7\ ^1/_4$ in.) (w/h/d)
Mounting dimensions	Approx. 182 × 53 × 163 mm ($7\ ^1/_4 \times 2\ ^1/_8 \times 6\ ^1/_2$ in.) (w/h/d)
Mass	Approx. 1.3 kg (2 lb. 13.9 oz.)
Supplied accessories	Rotary commander RM-X4V (1) Microphone (1) Parts for installation and connections (1 set) Front panel case (1)

Design and specifications are subject to change without notice.

FM/AM MINIDISC PLAYER

MICROFILM

SONY®

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

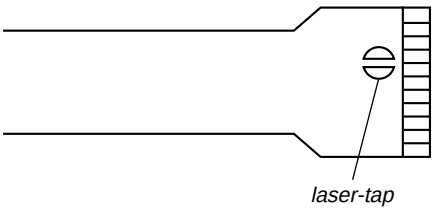
The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

Never look into the laser diode emission from right avove when checking it for adustment. It is feared that you will lose your sight.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK (KMS-241B/J1NP)

The laser diode in the optical pick-up block may suffer electrostatic break-down easily. When handling it, perform soldering bridge to the laser-tap on the flexible board. Also perform m easures against electrostatic break-down sufficiently before the operation.
The flexible board is easily damaged and should be handled with care.



OPTICAL PICK-UP FLEXIBLE BOARD

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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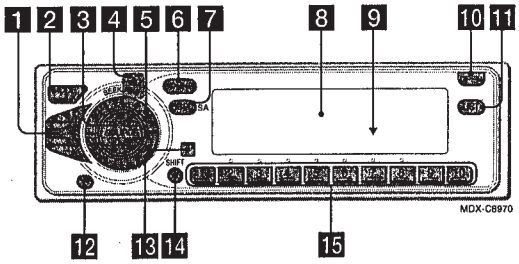
SECTION 1
GENERAL

This section is extracted from instruction manual.

Location of controls



Refer to the pages for details.

1 **SEEK/AMS (seek/Automatic Music Sensor/manual search/voice drive/voice memo select) control 10, 11, 12, 13, 14, 16, 18, 27, 28, 30, 33, 34**

2 **MODE (band/unit select) button 13, 26, 28, 32, 34**

3 **SOURCE (TUNER/MD/CD) button 9, 13, 19, 20, 21, 22, 26, 28, 32, 34, 36**

4 **⏏ (eject) button (located on the front side of the unit behind by the front panel) 9**

5 **Dial (volume/DSO level/equalizer level/listening position/front or rear speaker volume/subwoofer volume/balance) 8, 15, 18, 19, 20, 21, 22, 23, 31, 32**
Dial usually functions as a volume control except in some adjusting modes.

6 **SOUND button 19, 20, 21, 22, 23**

7 **DSPL/SA (display mode/spectrum analyzer change) button 9, 10, 14, 15, 26, 27, 31, 32**

8 **Display window**

9 **Reset button (located on the front side of the unit behind by the front panel) 7**

10 **OPEN button 7, 9, 37**

11 **LIST button**
Station Memo **14, 15, 35**
List-up **15, 32**
Disc Memo **31, 32, 35**

12 **OFF button* 7, 9**

13 **Sensor for the optional wireless remote**

14 **SHIFT button**
PLAY MODE **11, 12, 13, 14, 28, 29, 30, 33, 34**
REP **10, 28**
SET UP **8, 10, 26, 27**
SHUF **10, 28**

15 **During radio reception:**
Number buttons 13
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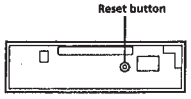
Direct disc selection buttons 27
During TV reception:
Number buttons 34

*** Warning when installing in a car without ACC (accessory) position on the ignition key switch**
Be sure to press (OFF) on the unit for two seconds to turn off the clock display after turned off the engine.
When you press (OFF) momentarily, the clock display does not turn off and this causes battery wear.

Getting Started

Resetting the unit

Before operating the unit for the first time or after replacing the car battery, you must reset the unit.
Press the reset button with a pointed object, such as a ball-point pen.



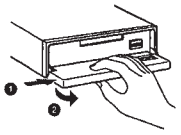
Notes
- *Pressing the reset button will erase the clock and some memorized functions.*
- *When you connect the power supply cord to the unit or reset the unit, wait for about 10 seconds before you insert a disc. If you insert a disc within these 10 seconds, the unit will not be reset, and you will have to press the reset button again.*

Detaching the front panel

You can detach the front panel of this unit to protect the unit from being stolen.

1 Press (OFF).

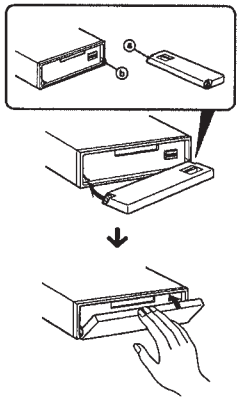
2 Press (OPEN) to open up the front panel, then slide the front panel to the right side, and pull out from the left side of the front panel.



Notes
- *Do not place anything on the inner surface of the front panel.*
- *Be sure not to drop the panel when detaching it from the unit.*
- *If you detach the panel while the unit is still on, the power will be turned off automatically to prevent the speakers from being damaged.*
- *When you carry the front panel with you, put it in the supplied front panel case.*

Attaching the front panel

Place the hole ⓐ in the front panel onto the spindle ⓑ on the unit as illustrated, then push the left side in.



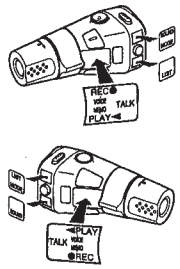
Notes
- *Be sure not to attach the front panel upside down.*
- *Do not press the front panel hard against the unit when attaching it. Press it lightly against the unit.*
- *Do not press hard or put excessive pressure on the display windows of the front panel.*
- *Do not expose the front panel to direct sunlight or heat sources such as hot air ducts, and do not leave it in a humid place. Never leave it on the dashboard of a car parked in direct sunlight where there may be a considerable rise in temperature.*

Caution alarm

If you turn the ignition key switch to the OFF position without removing the front panel, the caution alarm will beep for a few seconds.

Preparing the rotary commander

When you mount the rotary commander, attach the label as shown in the illustration below.

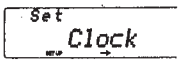


Setting the clock

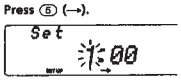
The clock uses a 12-hour digital indication.

Example: To set the clock to 10:08

1 Press (SHIFT), then press ③ (SET UP) repeatedly until "Clock" appears.



❶ Press ⑤ (→).

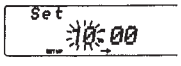


The hour digit flashes.

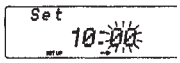
❷ Set the hour.

to go backward

to go forward



❸ Press ⑤ (→).

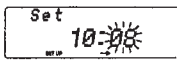


The minute digits flash.

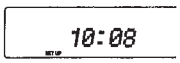
❹ Set the minute.

to go backward

to go forward



2 Press (SHIFT).



The clock starts.

3 Press (SHIFT).
After the mode setting is complete, the display returns to the normal playback mode.

Installation

Precautions

- Do not tamper with the four holes on the upper surface of the unit. They are used for tuner adjustments to be made only by service technicians.
- Choose the installation location carefully so that the unit will not interfere with the driver while driving.
- Avoid installing the unit where it would be subject to high temperatures, such as from direct sunlight or hot air from the heater, or where it would be subject to dust, dirt or excessive vibration.
- Use only the supplied mounting hardware for a safe and secure installation.

Mounting angle adjustment

Adjust the mounting angle to less than 20°.

How to detach and attach the front panel

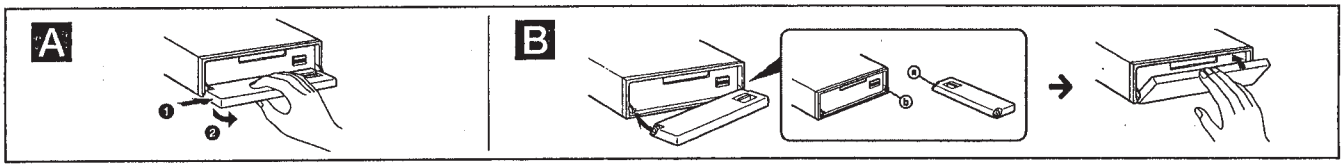
Before installing the unit, detach the front panel.

To detach A

Before detaching the front panel, be sure to press (OFF) first. Then press (OPEN) to open the front panel, then slide the front panel to the right side, and pull out the left side of the front panel.

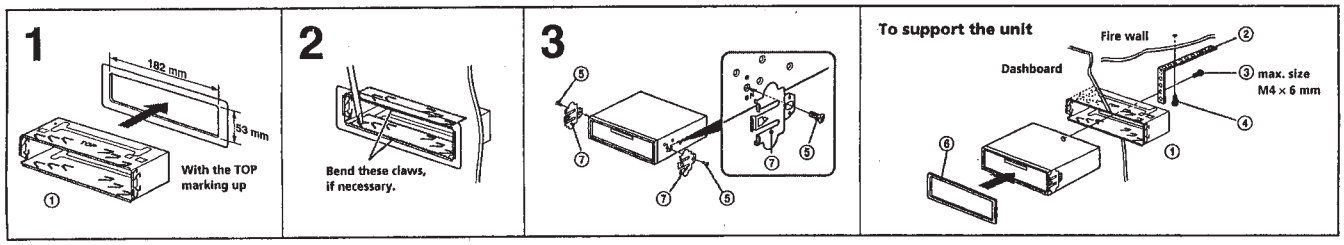
To attach B

Place the hole ⓔ in the front panel onto the spindle ⓑ on the unit as illustrated, then push the left side in.



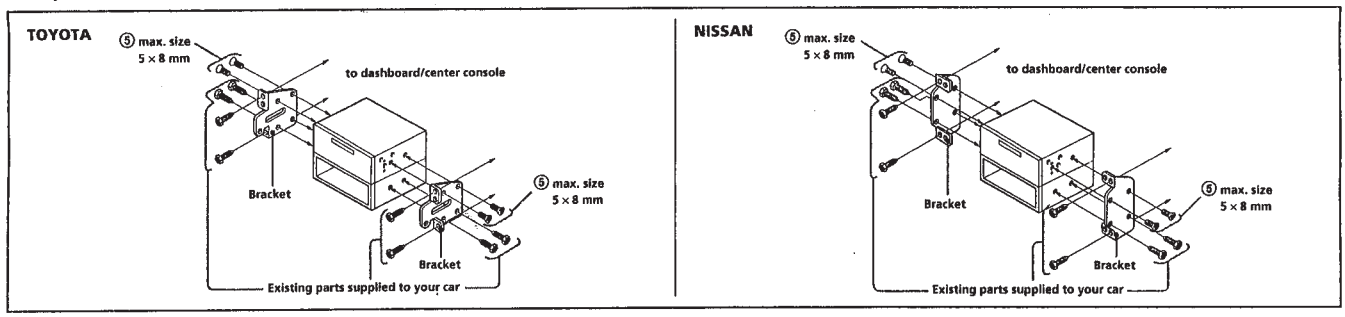
Mounting example

Installation in the dashboard



Mounting the unit in a Japanese car

You may not be able to install this unit in some makes of Japanese cars. In such a case, consult your Sony dealer.



Note

To prevent malfunction, install only with the supplied screws ⑤.

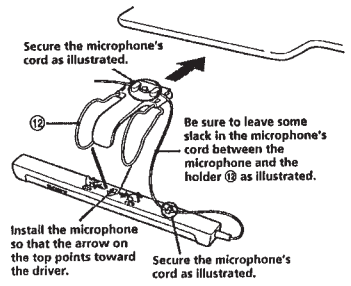
Microphone precautions

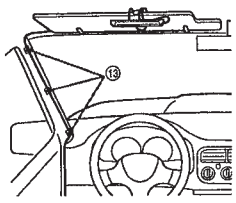
- This system receives the driver's voice from the microphone. When it is noisy outside your car, shut the windows. Engine noise may also prevent the system from recognizing the driver's voice.
- This microphone can receive sound from one direction only (directional microphone). Therefore it is important to install the microphone properly to ensure the driver's voice will be received.

Installing the microphone

Installation location

- Install the microphone underneath the sun visor in the pushed up position. Note that when the sun visor is lowered, the microphone will not receive the driver's voice.
- Install the microphone so that the arrow on the top points toward the driver.
- Consult your dealer when installing in a car equipped with an airbag system or shock absorbing device.

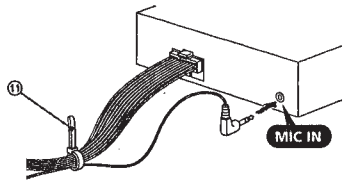

Secure the microphone's cord as illustrated.
⑫
Be sure to leave some slack in the microphone's cord between the microphone and the holder ⑫ as illustrated.
Install the microphone so that the arrow on the top points toward the driver.
Secure the microphone's cord as illustrated.



Secure the wire to the window frame so that the wire does not interfere with driving. Before attaching the clamp ⑬, clean the surface thoroughly.

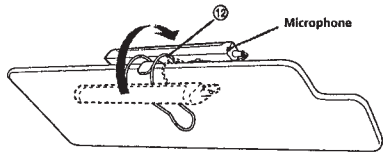
Connecting the microphone

1 Connect the microphone to the MIC jack of the audio equipment.
2 Bndle up the connecting cord of the microphone with other connecting cords of the audio equipment by attaching the supplied cramper ⑪. Be sure to leave some slack in the connecting cord between the plug and the cramper.



When you leave your car

Hide the microphone over the sun visor as illustrated to protect the microphone from being stolen.

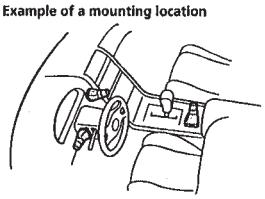


Installing the rotary commander

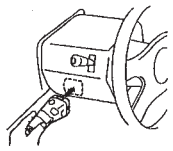
Notes

- *Choose the mounting location carefully so that the rotary commander will not interfere with operating the car.*
- *Do not install the rotary commander in a place where it may jeopardize the safety of the (front) passenger in any way.*
- *When installing the rotary commander, be sure not to damage the electrical cables, etc. on the other side of the mounting surface.*
- *Avoid installing the rotary commander where it may be subject to high temperatures, such as from direct sunlight or hot air from the heater, etc.*

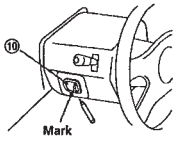
Example of a mounting location



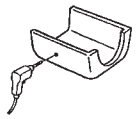
1 **Choose the exact location for the rotary commander to be mounted, then clean the mounting surface.**
Dirt or oil impair the adhesive strength of the double-sided adhesive tape.



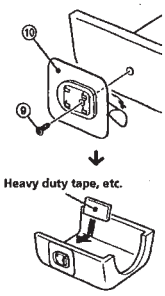
2 **Mark the position for the supplied screw.**
Use the screw hole on the mounting hardware ⑩ to mark the position.
If you cannot make the mounting hardware ⑩ fit easily, cut the mounting hardware ⑩ to fit the steering wheel column cover.



3 **Remove the steering wheel column cover, and drill 2 mm (5/32 in.) diameter hole where you have marked.**



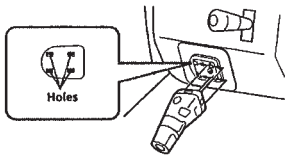
4 **Warm the mounting surface and the double-sided adhesive tape on the mounting hardware ⑩ to the temperature of 20°C (68°F) to 30°C (86°F), and attach the mounting hardware to the mounting surface by applying even pressure. Then screw it down with the supplied screw ⑨.**
Attach a piece of heavy duty tape, etc. on the other side of the mounting surface to cover the protruding tip of the screw so that they will not interfere with any electrical cables, etc. inside the steering wheel column.



5 **After installing the steering wheel column cover, attach the rotary commander to the mounting hardware by aligning the four holes on the bottom of the rotary commander with the four catches on the mounting hardware and sliding the rotary commander until it locks into place as illustrated.**

Note

If you are mounting the rotary commander to the steering wheel column, make sure that the protruding tip of the screw on the inner surface of the column does not in any way hinder or interfere with the movement of the rotating shaft, operative parts of the switches or the electrical cables, etc. inside the column.



Connections

Cautions

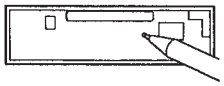
- This unit is designed for negative ground 12 V DC operation only.
- Before making connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Connect the **yellow** and **red** power input leads only after all other leads have been connected.
- Be sure to connect the red power input lead to the positive 12 V power terminal which is energized when the ignition key is in the accessory position.
- **Run all ground wires to a common ground point.**
- Connect the yellow cord to a free car circuit rated higher than the unit's fuse rating. If you connect this unit in series with other stereo components, the car circuit they are connected to must be rated higher than the sum of the individual component's fuse rating. If there are no car circuits rated as high as the unit's fuse rating, connect the unit directly to the battery. If no car circuits are available for connecting this unit, connect the unit to a car circuit rated higher than the unit's fuse rating in such a way that if the unit blows its fuse, no other circuits will be cut off.
- The use of optical instruments with this product will increase eye hazard.

Warning when installing in a car without ACC (accessory) position on the ignition key switch

Be sure to press (OFF) on the unit for two seconds to turn off the clock display after turned off the engine.
When you press (OFF) momentarily, the clock display does not turn off and this causes battery wear.

Reset button

When the installation and connections are over, be sure to press the reset button with a ball-point pen, etc.

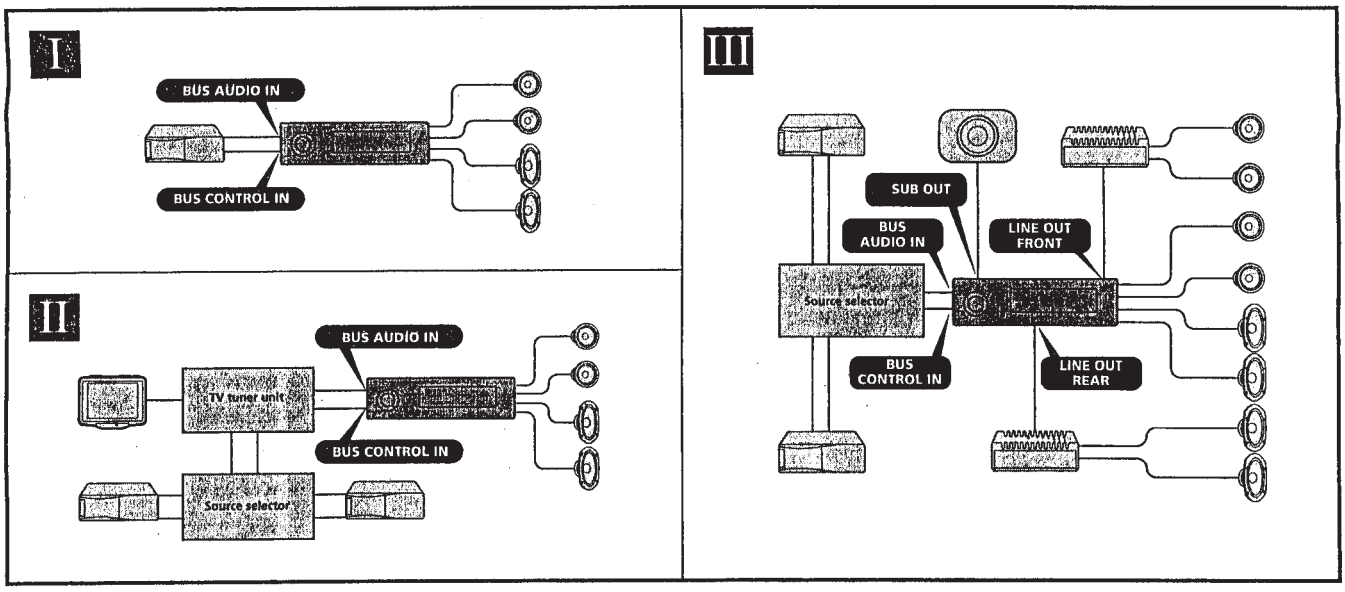


Connection diagram

Equipment used in illustrations (not supllied)

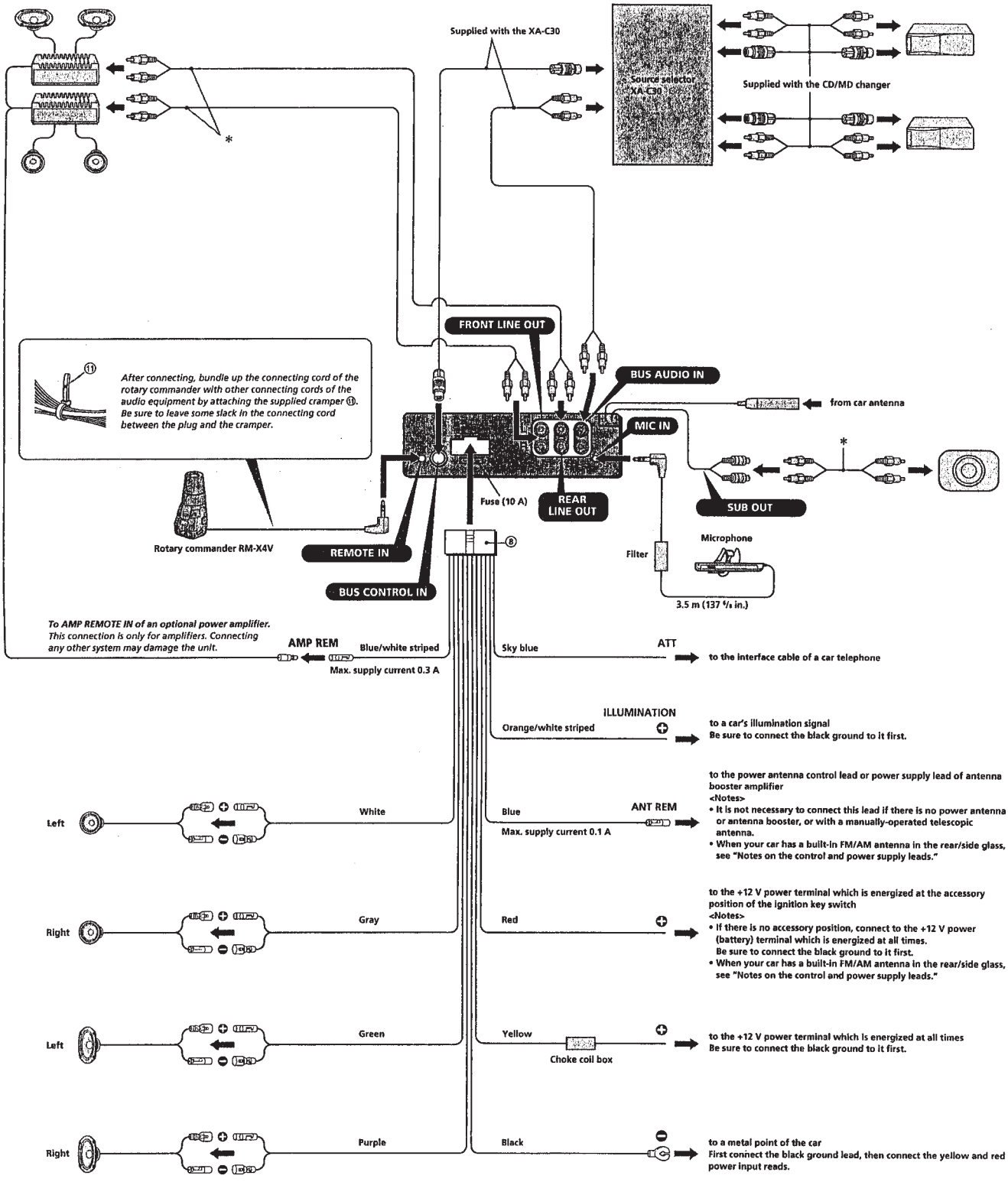
Note
For connecting two or more changers, the source selector XA-C30 (optional) is necessary.

Front speaker
Active subwoofer
Power amplifier
Rear speaker
TV monitor
CD/MD changer



Connection example

* RCA pin cord (not supplied)


Supplied with the XA-C30
Source selector XA-C30
Supplied with the CD/MD changer
*
After connecting, bundle up the connecting cord of the rotary commander with other connecting cords of the audio equipment by attaching the supplied cramper ⑪. Be sure to leave some slack in the connecting cord between the plug and the cramper.
FRONT LINE OUT
BUS AUDIO IN
from car antenna
MIC IN
*
Fuse (10 A)
REAR LINE OUT
SUB OUT
Rotary commander RM-X4V
REMOTE IN
BUS CONTROL IN
Microphone
Filter
3.5 m (137 9/16 in.)
To AMP REMOTE IN of an optional power amplifier. This connection is only for amplifiers. Connecting any other system may damage the unit.
AMP REM
Blue/white striped
Max. supply current 0.3 A
Sky blue
ATT
to the interface cable of a car telephone
ILLUMINATION
Orange/white striped
to a car's illumination signal
Be sure to connect the black ground to it first.
Left
White
Blue
ANT REM
Max. supply current 0.1 A
to the power antenna control lead or power supply lead of antenna booster amplifier
<Notes>
• It is not necessary to connect this lead if there is no power antenna or antenna booster, or with a manually-operated telescopic antenna.
• When your car has a built-in FM/AM antenna in the rear/side glass, see "Notes on the control and power supply leads."
Right
Gray
Red
to the +12 V power terminal which is energized at the accessory position of the ignition key switch
<Notes>
• If there is no accessory position, connect to the +12 V power (battery) terminal which is energized at all times.
Be sure to connect the black ground to it first.
• When your car has a built-in FM/AM antenna in the rear/side glass, see "Notes on the control and power supply leads."
Left
Green
Yellow
Choke coil box
to the +12 V power terminal which is energized at all times
Be sure to connect the black ground to it first.
Right
Purple
Black
to a metal point of the car
First connect the black ground lead, then connect the yellow and red power input reads.

Notes on the control and power supply leads

- *The power antenna control lead (blue) supplies +12 V DC when you turn on the tuner.*
- *When your car has built-in FM/AM antenna in the rear/side glass, it is necessary to connect the power antenna control lead (blue) or the accessory power input lead (red) to the power terminal of the existing antenna booster. For details, consult your dealer.*
- *A power antenna without relay box cannot be used with this unit.*

Memory hold connection

When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition key is turned off.

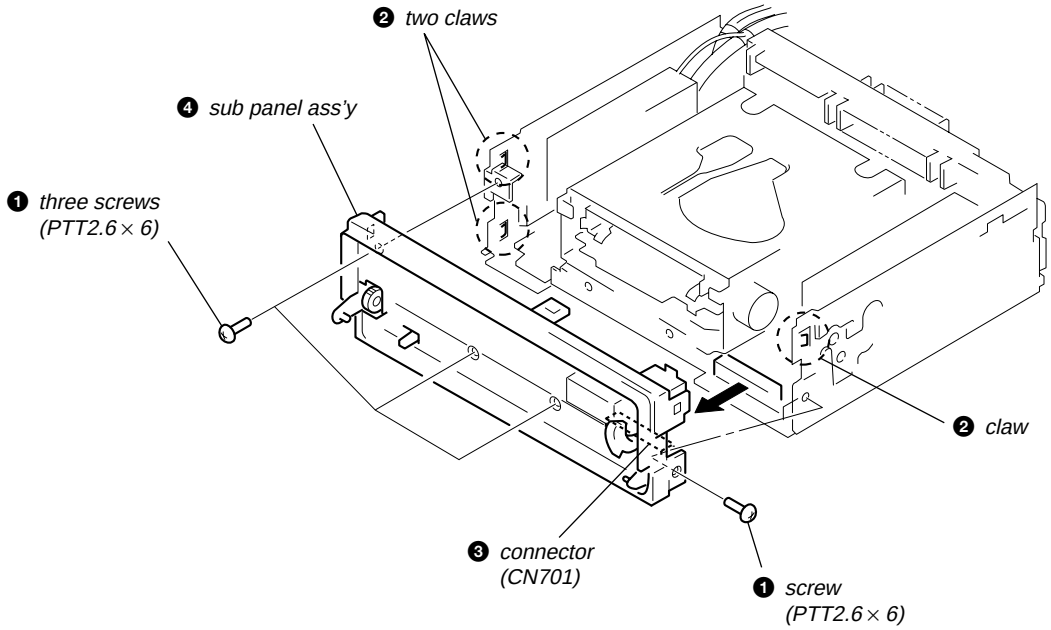
Notes on speaker connection

- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.*
- *Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Therefore, be sure to connect passive speakers to these terminals.*

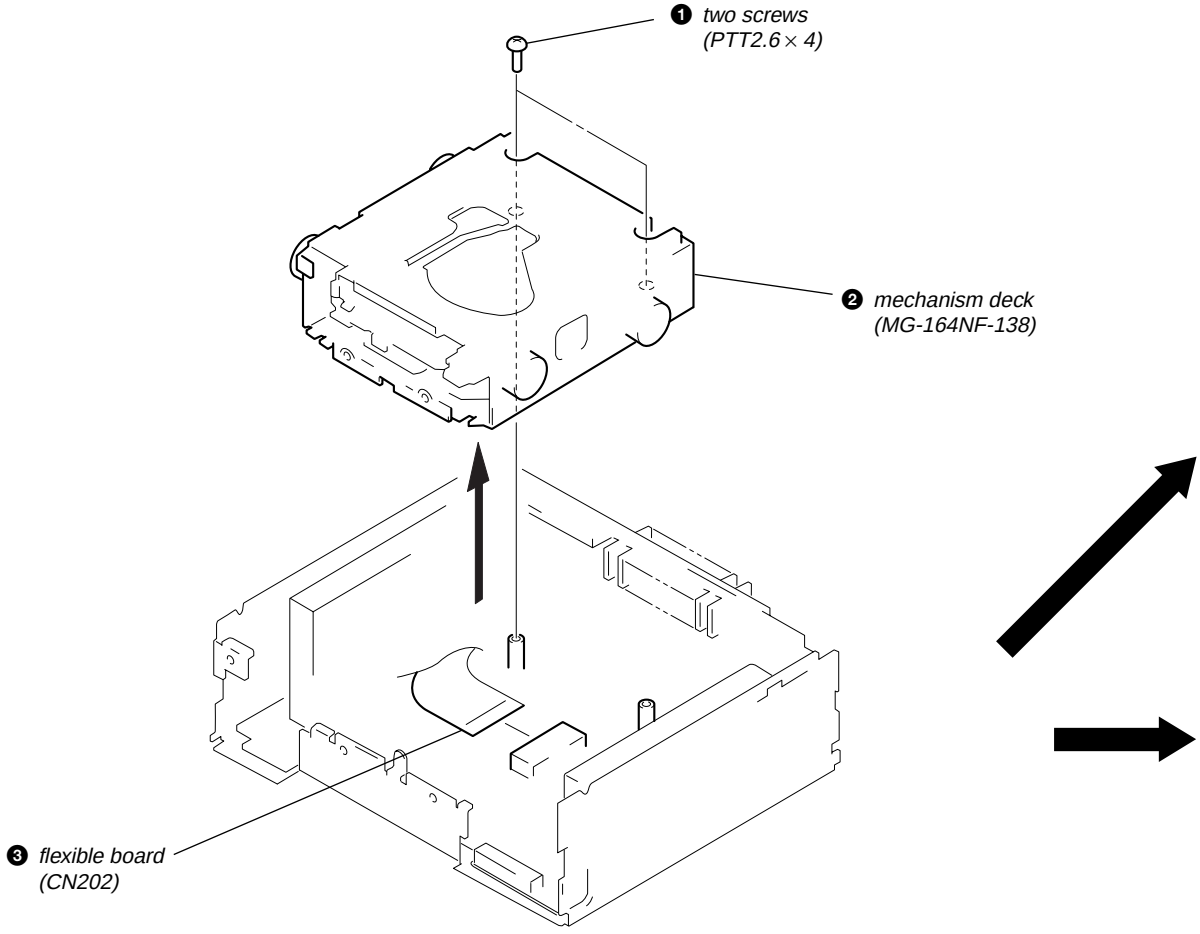
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

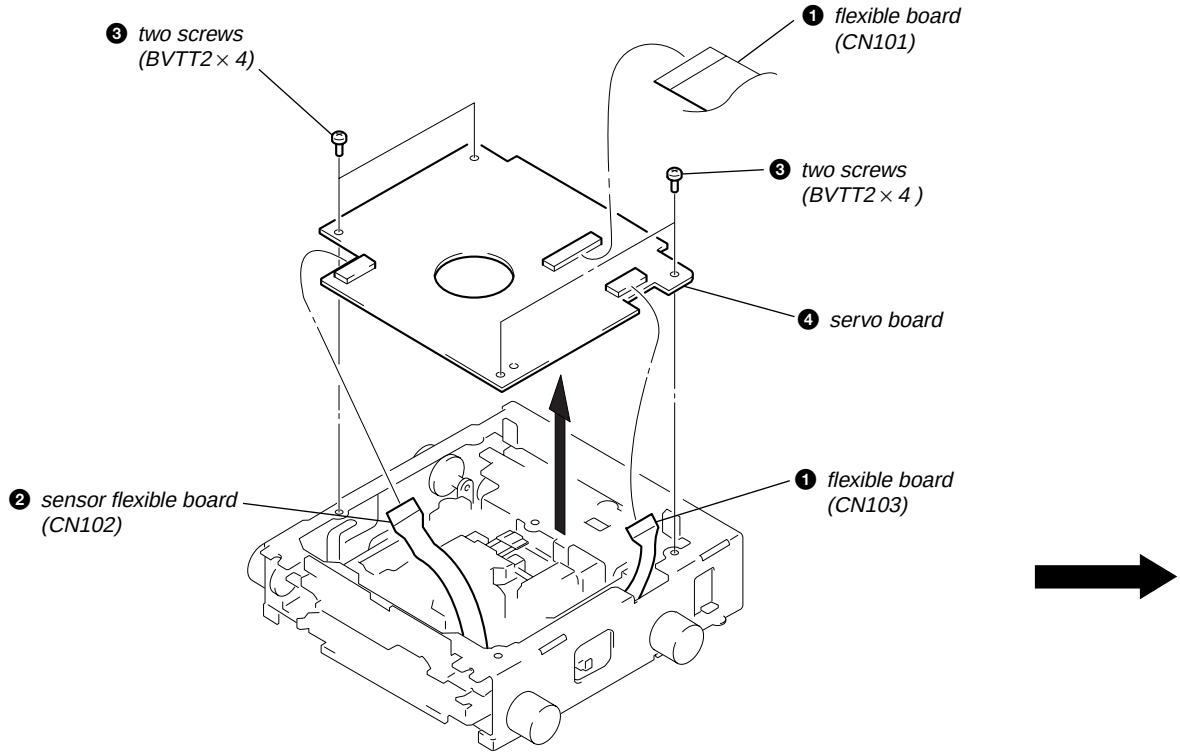
SUB PANEL ASS'Y



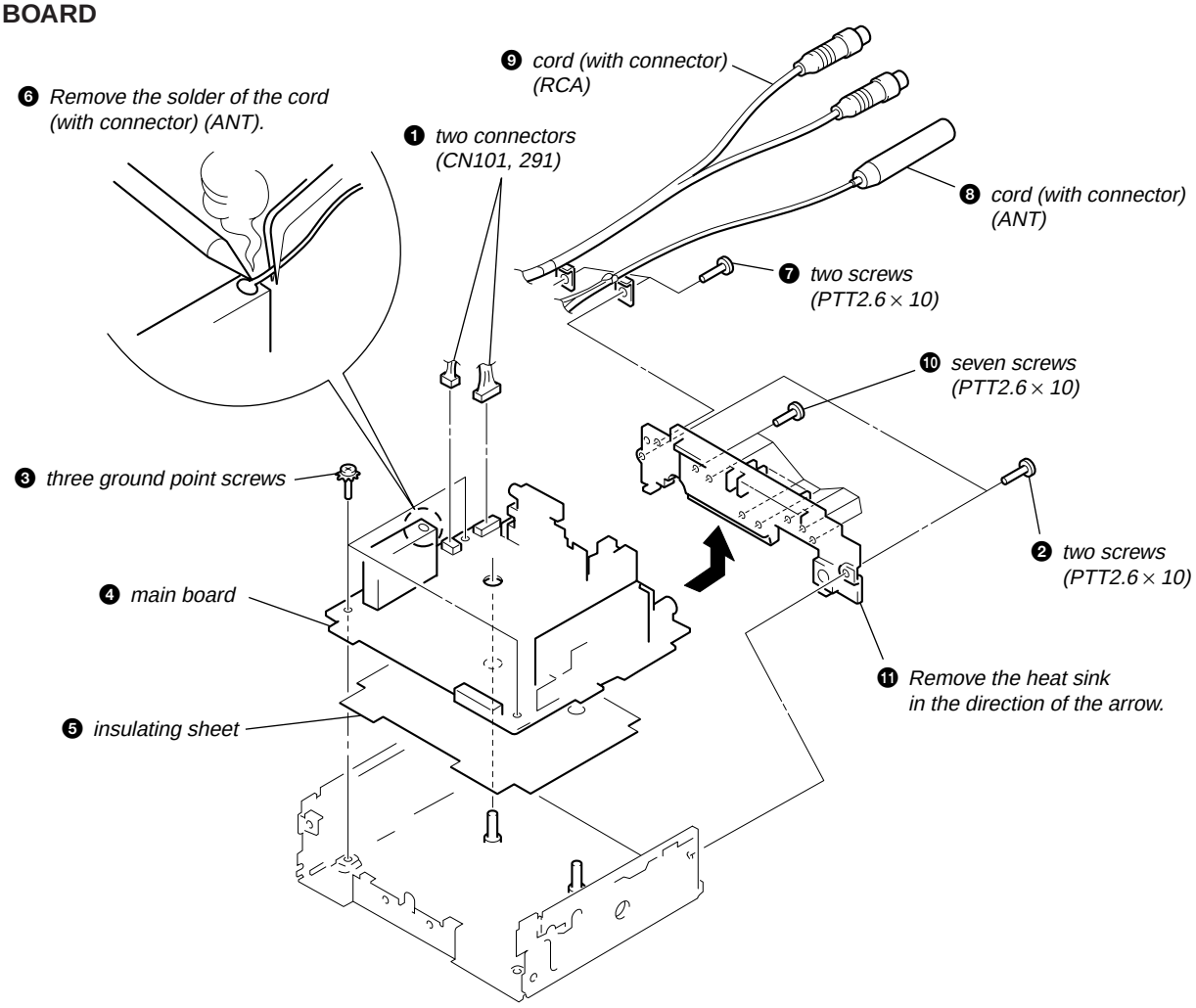
MECHANISM DECK (MG-164NF-138)



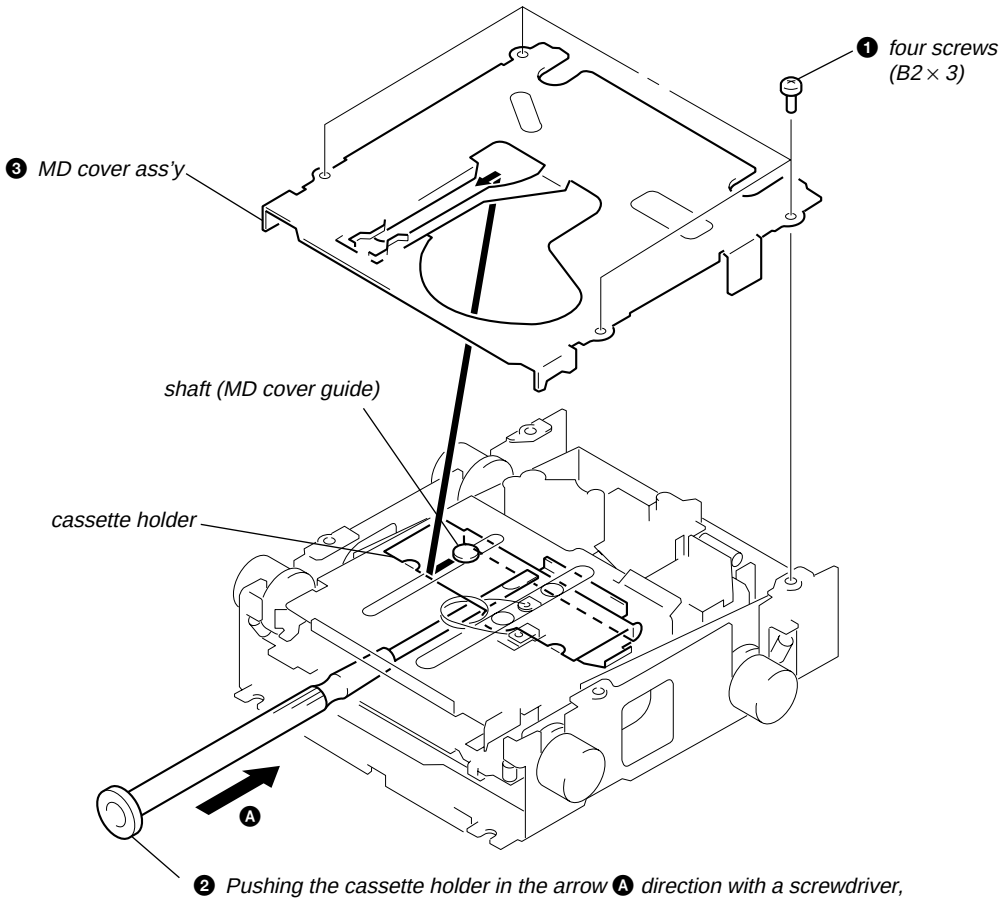
SERVO BOARD


❸ two screws (BVTT2 × 4)
❶ flexible board (CN101)
❸ two screws (BVTT2 × 4)
❹ servo board
❷ sensor flexible board (CN102)
❶ flexible board (CN103)

MAIN BOARD

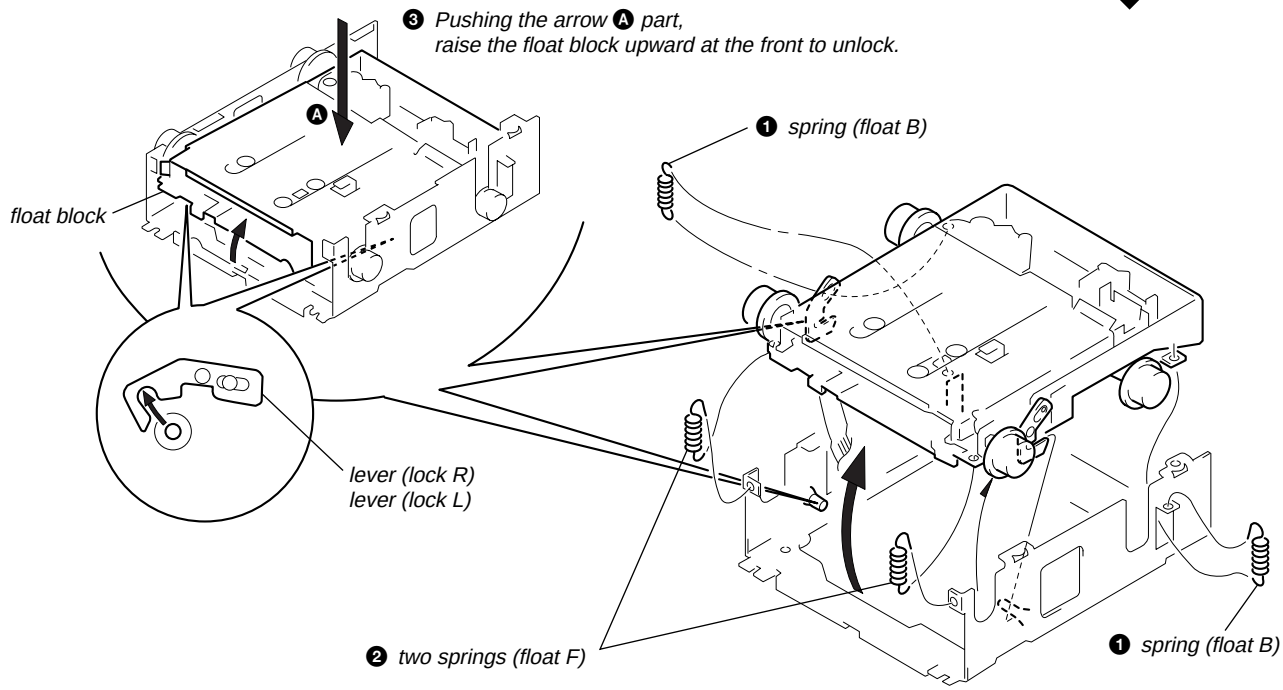

❻ Remove the solder of the cord (with connector) (ANT).
❶ two connectors (CN101, 291)
❾ cord (with connector) (RCA)
❽ cord (with connector) (ANT)
❼ two screws (PTT2.6 × 10)
❿ seven screws (PTT2.6 × 10)
❸ three ground point screws
❷ two screws (PTT2.6 × 10)
❹ main board
⓫ Remove the heat sink in the direction of the arrow.
❺ insulating sheet

MD COVER ASS'Y

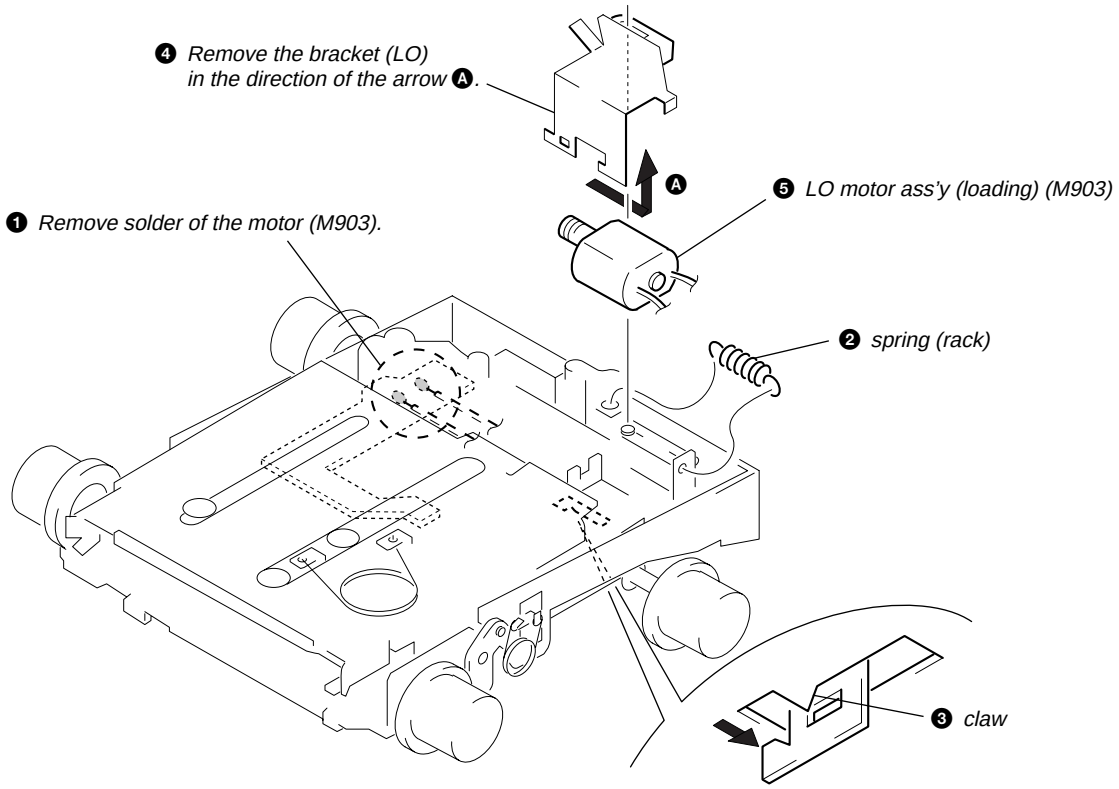


❷ Pushing the cassette holder in the arrow Ⓐ direction with a screwdriver, disengage the shaft (MD cover guide) from the groove of MD cover ass'y.
Note : Be careful not to damage the optical pick-up when pushing the cassette holder with a screwdriver.

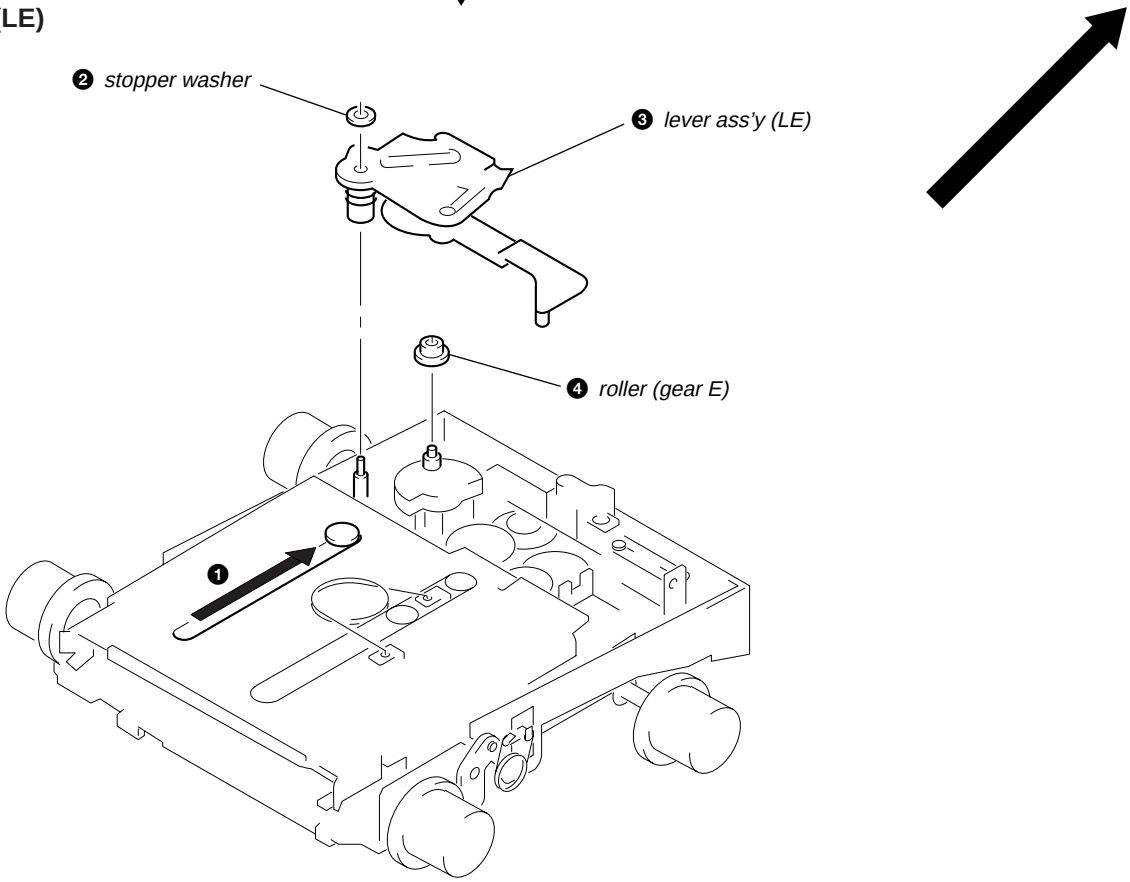
FLOAT BLOCK


❸ Pushing the arrow Ⓐ part, raise the float block upward at the front to unlock.
A
float block
❶ spring (float B)
lever (lock R)
lever (lock L)
❷ two springs (float F)
❶ spring (float B)

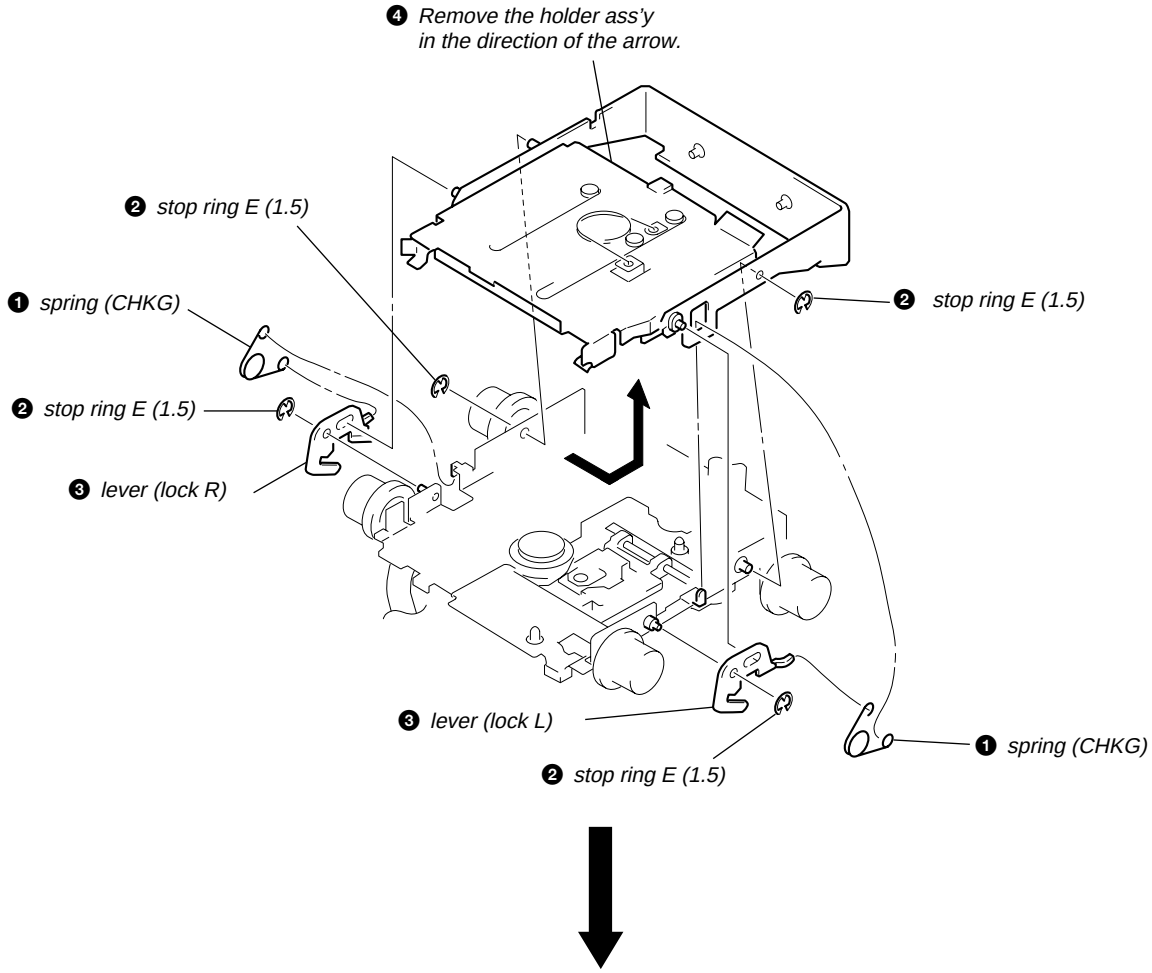
LO MOTOR ASS'Y (LOADING) (M903)


❹ Remove the bracket (LO) in the direction of the arrow Ⓐ.
Ⓐ
❺ LO motor ass'y (loading) (M903)
❶ Remove solder of the motor (M903).
❷ spring (rack)
❸ claw

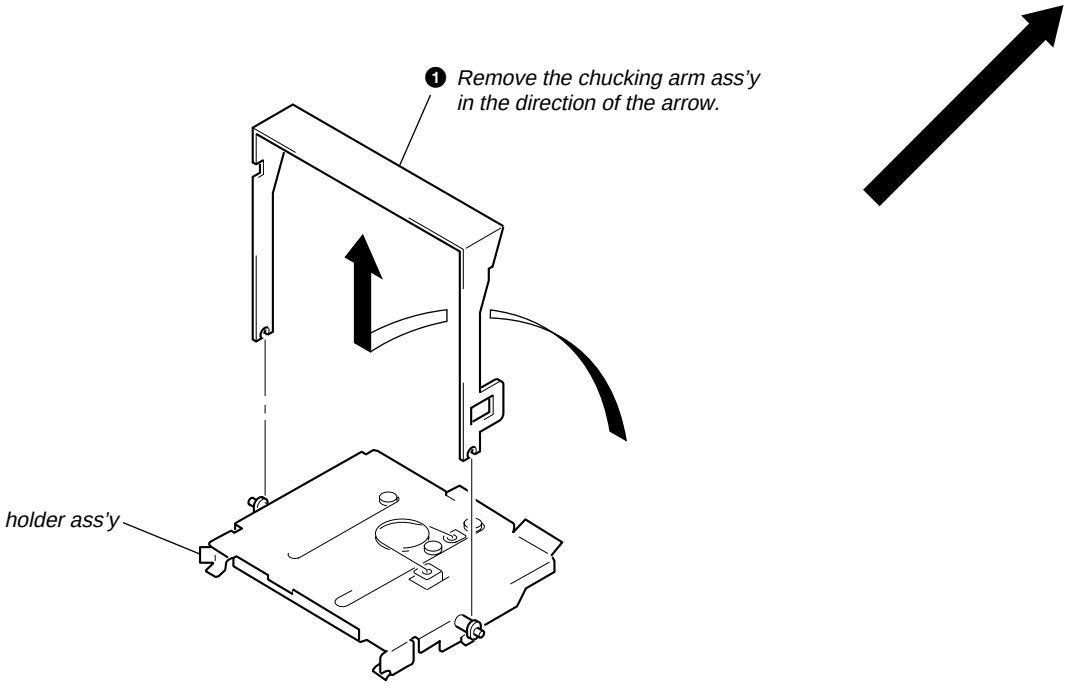
LEVER ASS'Y (LE)



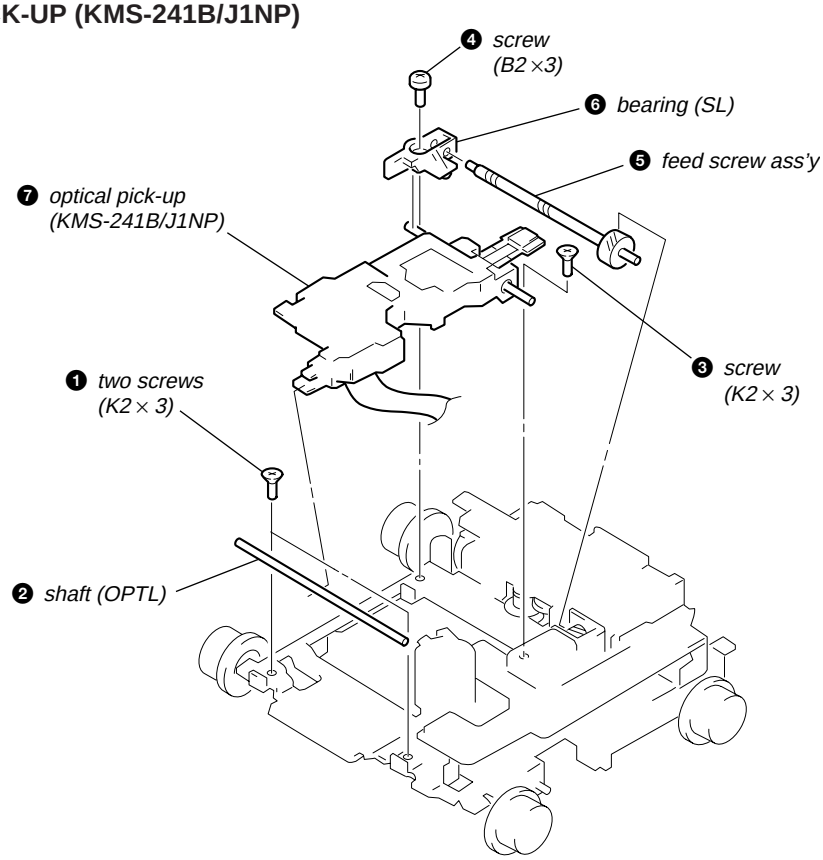
HOLDER ASS'Y


❹ Remove the holder ass'y in the direction of the arrow.
❷ stop ring E (1.5)
❶ spring (CHKG)
❷ stop ring E (1.5)
❸ lever (lock R)
❷ stop ring E (1.5)
❶ spring (CHKG)
❸ lever (lock L)
❷ stop ring E (1.5)

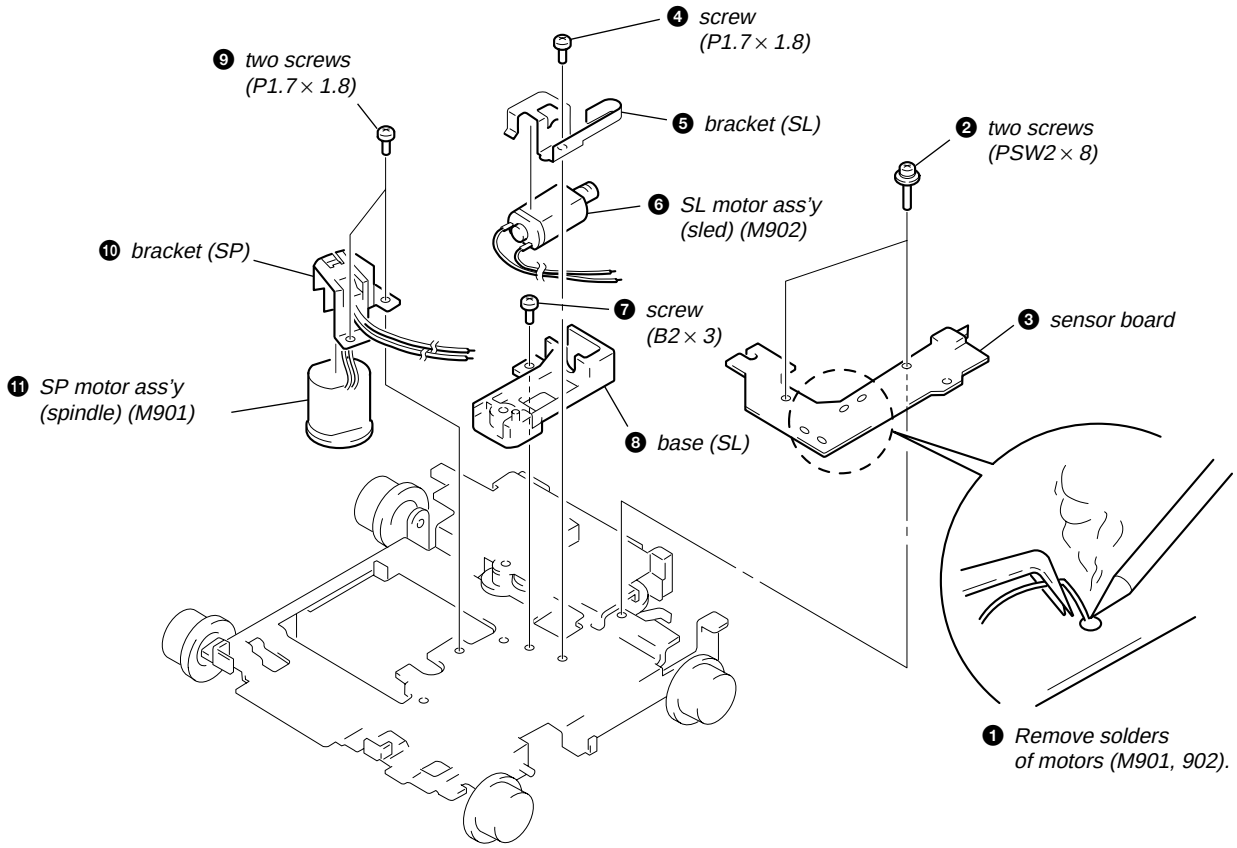
CHUCKING ARM ASS'Y



OPTICAL PICK-UP (KMS-241B/J1NP)



SL MOTOR ASS'Y (SLED) (M902)/SP MOTOR ASS'Y (SPINDLE) (M901)


❹ screw (P1.7 × 1.8)
❾ two screws (P1.7 × 1.8)
❺ bracket (SL)
❷ two screws (PSW2 × 8)
❻ SL motor ass'y (sled) (M902)
❿ bracket (SP)
❼ screw (B2 × 3)
❸ sensor board
⓫ SP motor ass'y (spindle) (M901)
❽ base (SL)
❶ Remove solders of motors (M901, 902).

SECTION 3
ELECTRICAL ADJUSTMENTS

TEST MODE

This set have the test mode function. In the test mode, FM Auto Scan/Stop Level and AM Auto Scan/Stop Level adjustments can be performed easier than it in ordinary procedure.

<Set the Test Mode>

1. Turn ON the regulated power supply. (All LEDs on the set lights up, and the clock is displayed.)
   Note: Press the [OFF] button, if the clock is not displayed.
2. Push the preset [4] button.
3. Push the preset [5] button.
4. Press the preset [1] button for more than two seconds.
5. Then the display indicates all lights, the test mode is set.

<Release the Test mode>

1. Push the [OFF] button.

See the adjustment location from on page 17 for the adjustment.

MD SECTION

MD section adjustments are done automatically in this set.

TUNER SECTION

0 dB=1 µV

Cautions during repair
When the tuner unit is defective, replace it by a new one because its internal block is difficult to repair.

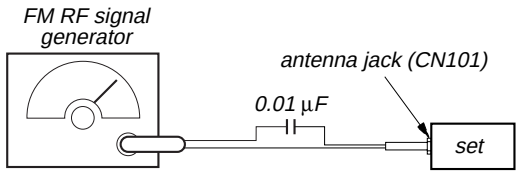
Note: Adjust the tuner section in the sequence shown below.

1. FM Auto Scan/Stop Level Adjustment
2. FM Stereo Separation Adjustment (Wide)
3. FM Stereo Separation Adjustment (Narrow)
4. AM Auto Scan/Stop Level Adjustment

FM Auto Scan/Stop Level Adjustment

Setting:

[SOURCE] button : FM

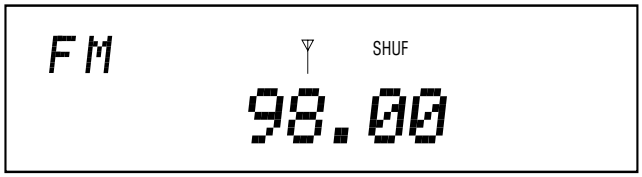


Carrier frequency : 98.00 MHz
Output level : 22 dB (12.6 µV)
Mode : mono
Modulation : 1 kHz, 22.5 kHz deviation (30%)

Procedure:

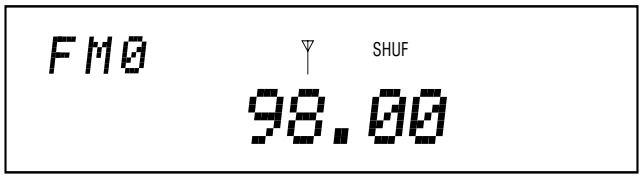
1. Set to the test mode.
2. Push the [SOURCE] button and set to FM.

Display



3. Adjust the volume RV2 on TU101 by turning clockwise untill "0" is shown next to "FM" on the display window, If "0" is already shown or the volume RV2 has been turned too far, turn it back counterclockwise untill "0" is disappeared once, then try this adjustment.

Display

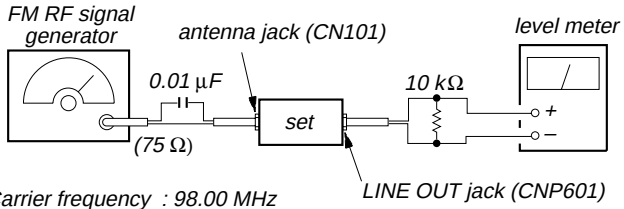


Adjustment Location: See page 17.

FM Stereo Separation Adjustment (Wide)

Setting:

SOURCE button : FM



Carrier frequency : 98.00 MHz
Output level : 70 dB (3.2 mV)
Mode : stereo
Modulation : main : 1 kHz, 33.75 kHz deviation (45%)
sub : 1 kHz, 33.75 kHz deviation (45%)
19 kHz pilot: 7.5 kHz deviation (10%)

Procedure:

1. Adjust the volume RV3 on FM/AM tuner unit (TU101) for the best separation.

FM Stereo signal generator output channel	Level meter connection	Level meter reading (dB)
L-CH	L-CH	Ⓐ
L-CH	R-CH	Ⓑ Adjust RV3 on TU101 for minimum reading.
R-CH	R-CH	Ⓒ
R-CH	L-CH	Ⓓ

L-CH Stereo separation: Ⓐ-Ⓑ
R-CH Stereo separation: Ⓒ-Ⓓ
The separations of both channels should be equal.

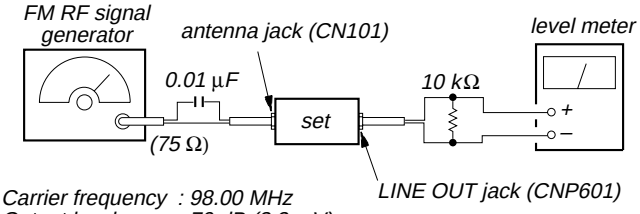
Specification: Separation more than 24 dB

Adjustment Location: See page 17.

FM Stereo Separation Adjustment (Narrow)

Setting:

SOURCE button : FM



Carrier frequency : 98.00 MHz
Output level : 70 dB (3.2 mV)
Mode : stereo
Modulation : main : 1 kHz, 20 kHz deviation (26.5%)
sub : 1 kHz, 20 kHz deviation (26.5%)
19 kHz pilot: 7.5 kHz deviation (10%)

Procedure:

1. Push the SHIFT button.
2. Push the 4 button four times.
3. Push the 5 button twice and set to narrow mode.
4. Adjust the volume RV4 on FM/AM tuner unit (TU101) for the best separation.

FM Stereo signal generator output channel	Level meter connection	Level meter reading (dB)
L-CH	L-CH	Ⓐ
L-CH	R-CH	Ⓑ Adjust RV4 on TU101 for minimum reading.
R-CH	R-CH	Ⓒ
R-CH	L-CH	Ⓓ

L-CH Stereo separation: Ⓐ-Ⓑ
R-CH Stereo separation: Ⓒ-Ⓓ
The separations of both channels should be equal.

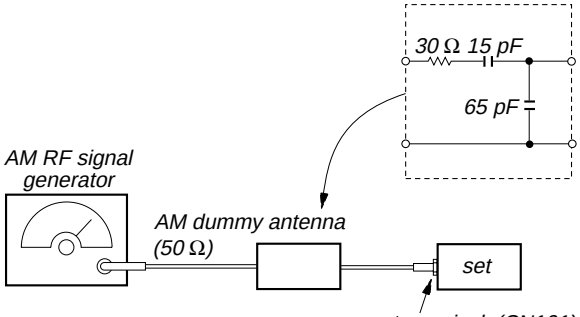
Specification: Separation more than 18 dB

Adjustment Location: See page 17.

AM Auto Scan/Stop Level Adjustment

Setting:

SOURCE → MODE button : AM

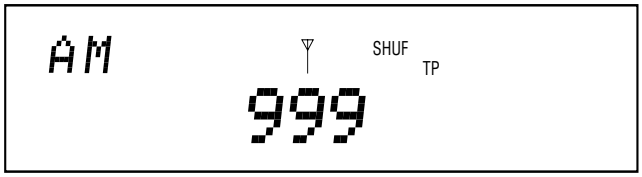


Carrier frequency : 999 kHz
30% amplitude modulation by 1 kHz signal
Output level : 33 dB (44.7 μV)

Procedure:

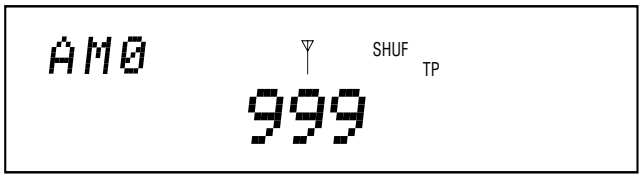
1. Set to the test mode. (See page 15.)
2. Push the SOURCE button and set to FM.
3. Push the MODE button and set to AM.

Display



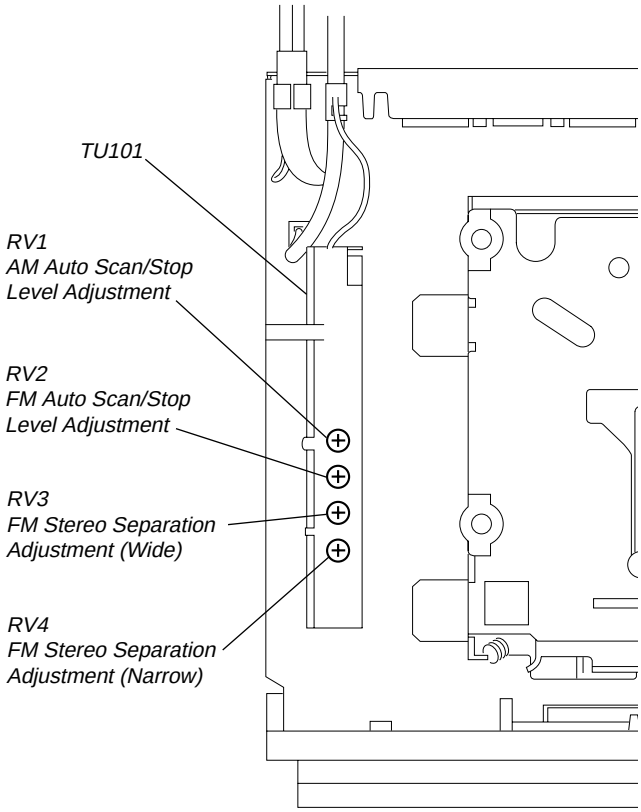
4. Adjust the volume RV1 on TU101 by turning clockwise untill "0" is shown next to "MW" on the display window, If "0" is already shown or the volume RV1 has been turned too far, turn it back counterclockwise untill "0" is disappeared once, then try this adjustment.

Display



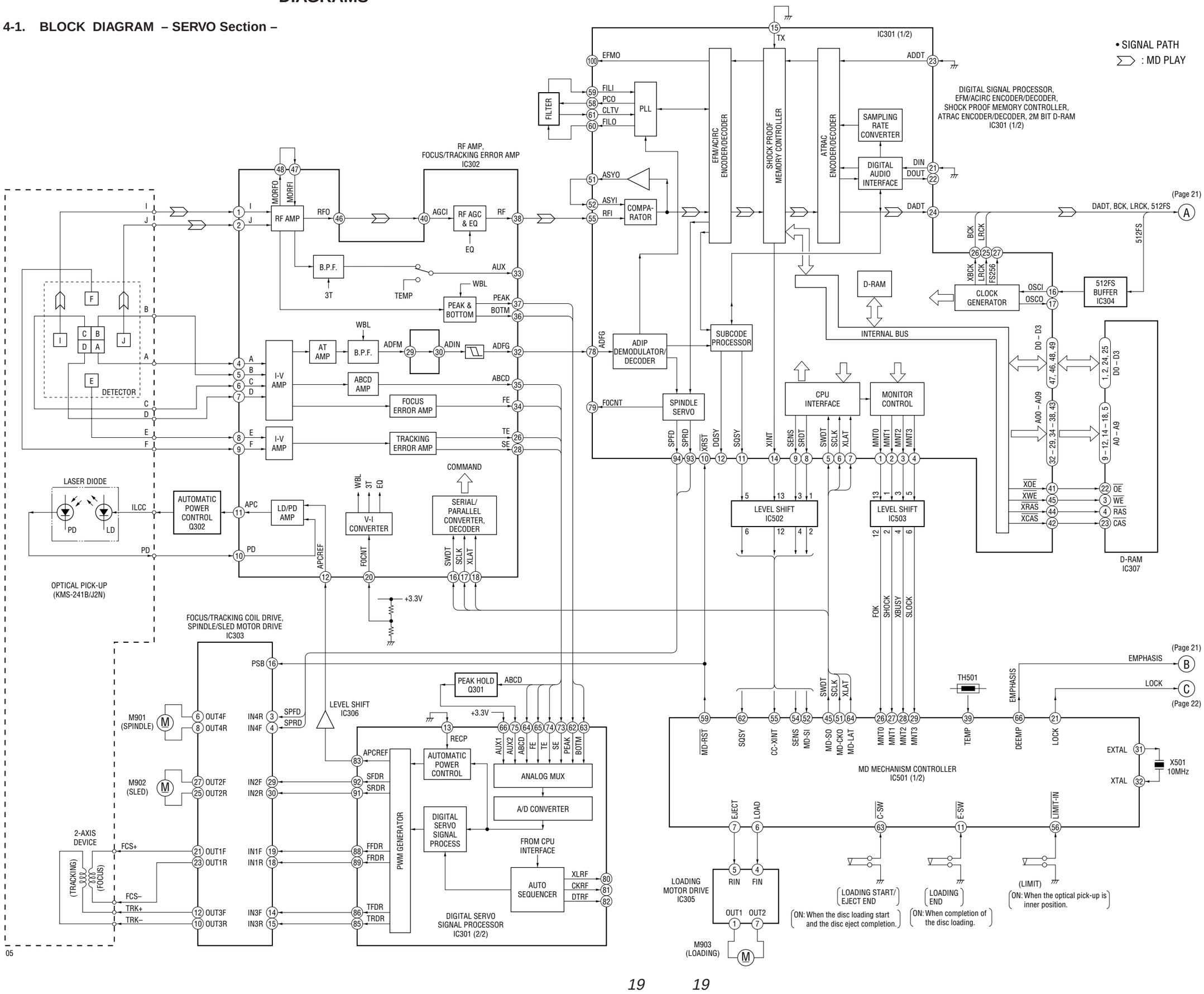
Adjustment Location: See page 17.

Adjustment Location:

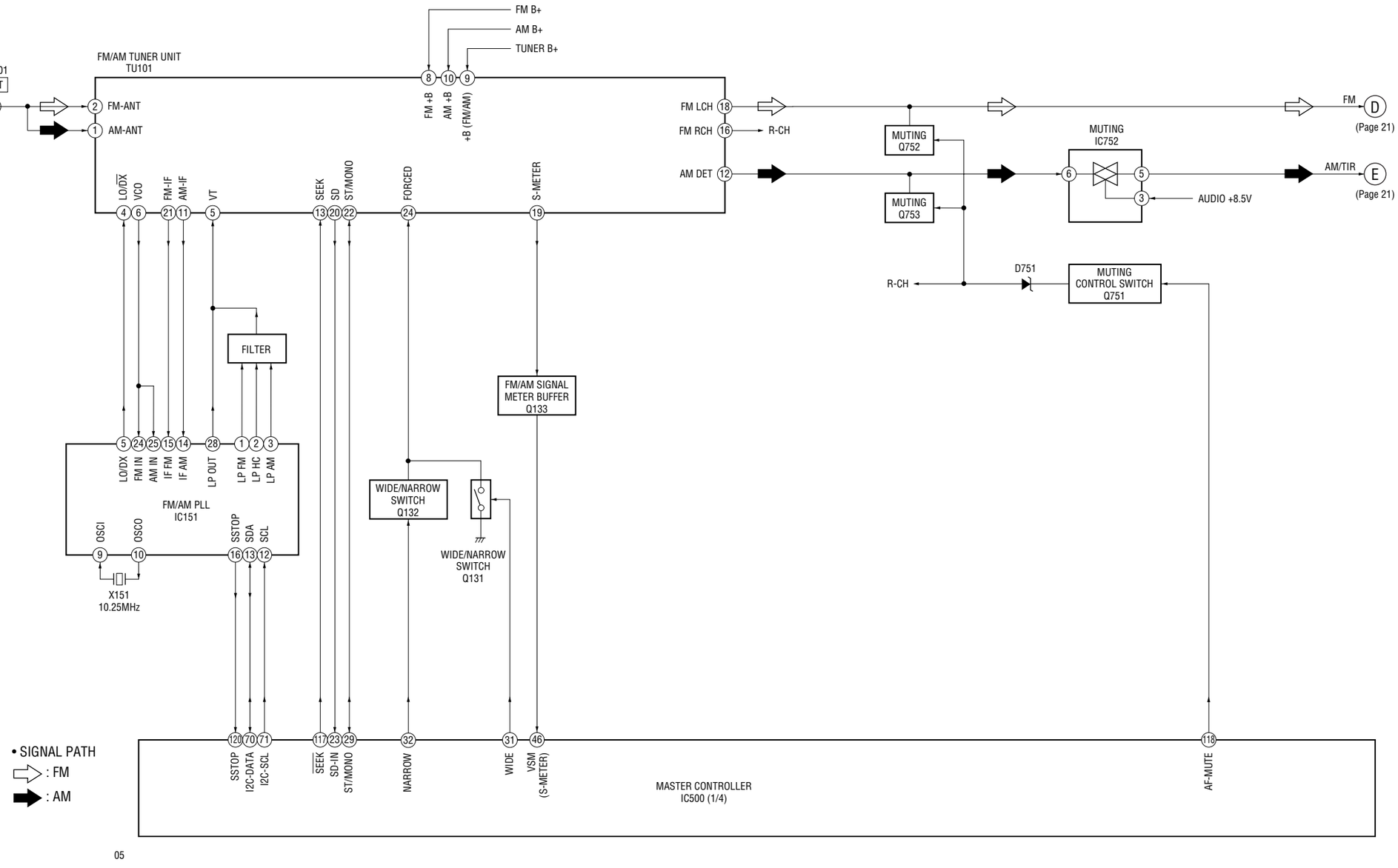


SECTION 4
DIAGRAMS

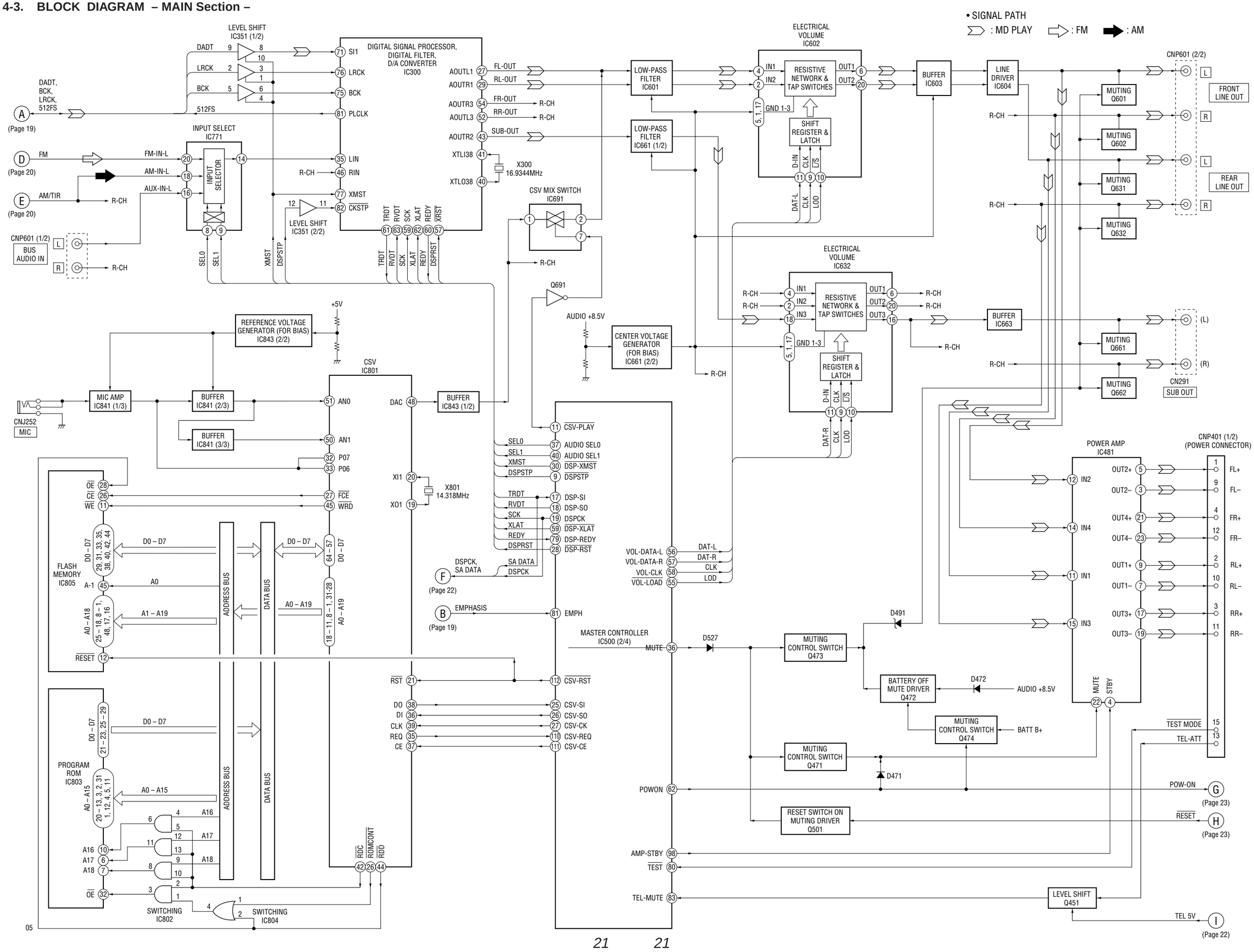
4-1. BLOCK DIAGRAM – SERVO Section –



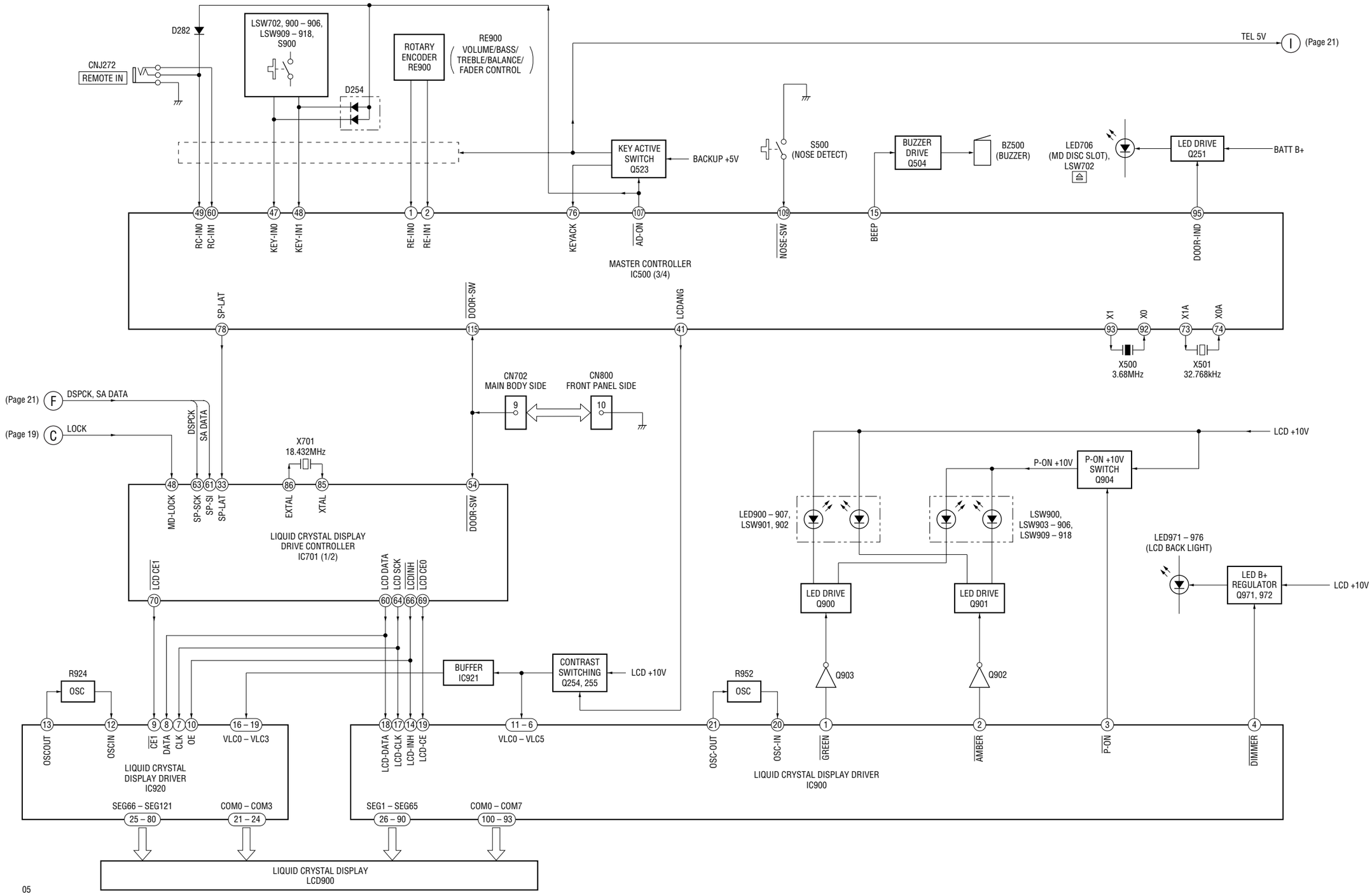
4-2. BLOCK DIAGRAM – TUNER Section –



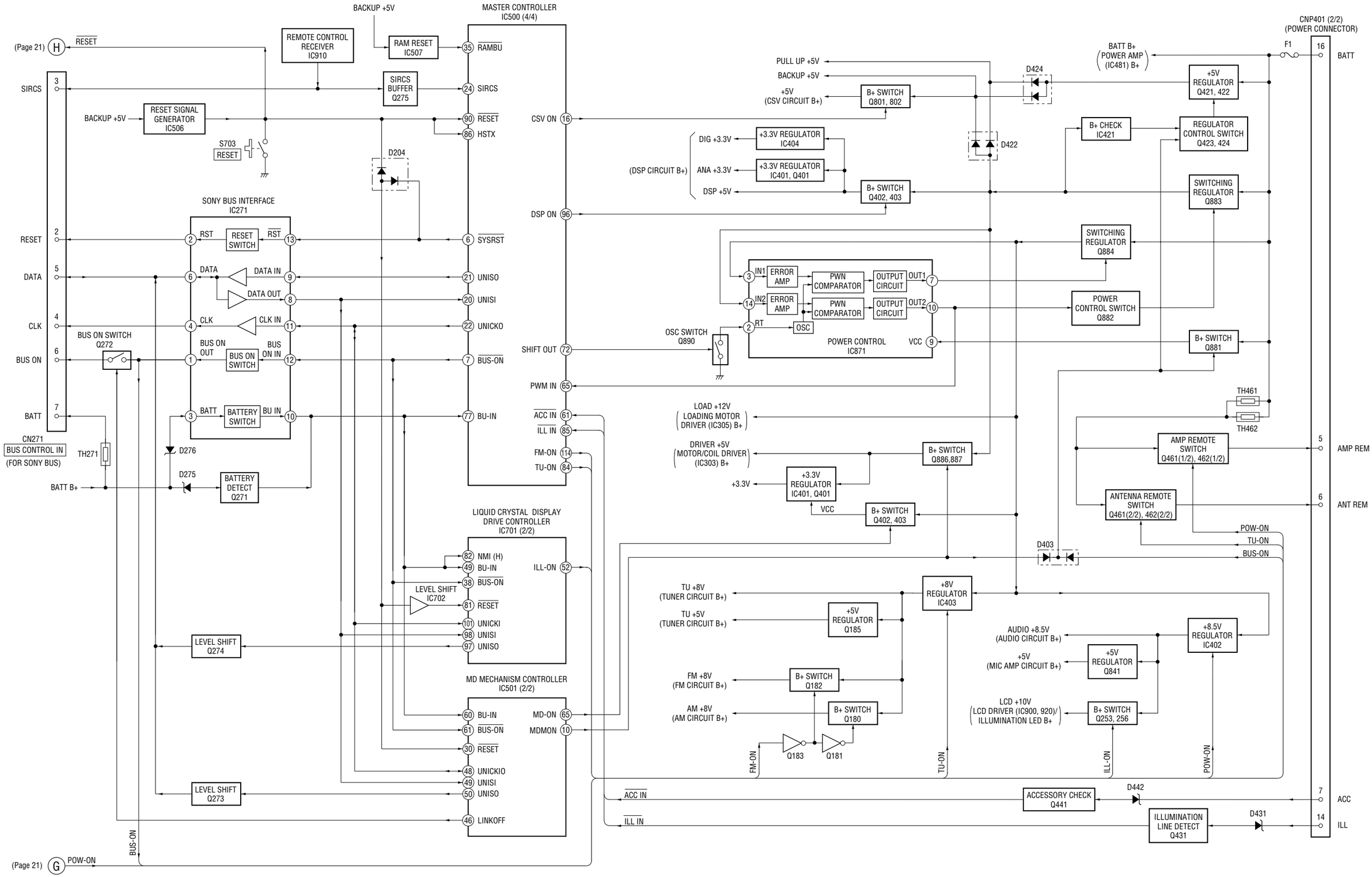
4-3. BLOCK DIAGRAM – MAIN Section –



4-4. BLOCK DIAGRAM – DISPLAY/KEY CONTROL Section –



4-5. BLOCK DIAGRAM – BUS CONTROL/POWER SUPPLY Section –



05

4-6. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS
(In addition to this, the necessary note is printed in each block)

Note on Printed Wiring Boards:
- ○—— : parts extracted from the component side.
- —— : parts extracted from the conductor side.
- ● : Through hole.
- △ : internal component.
- ▒▒ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

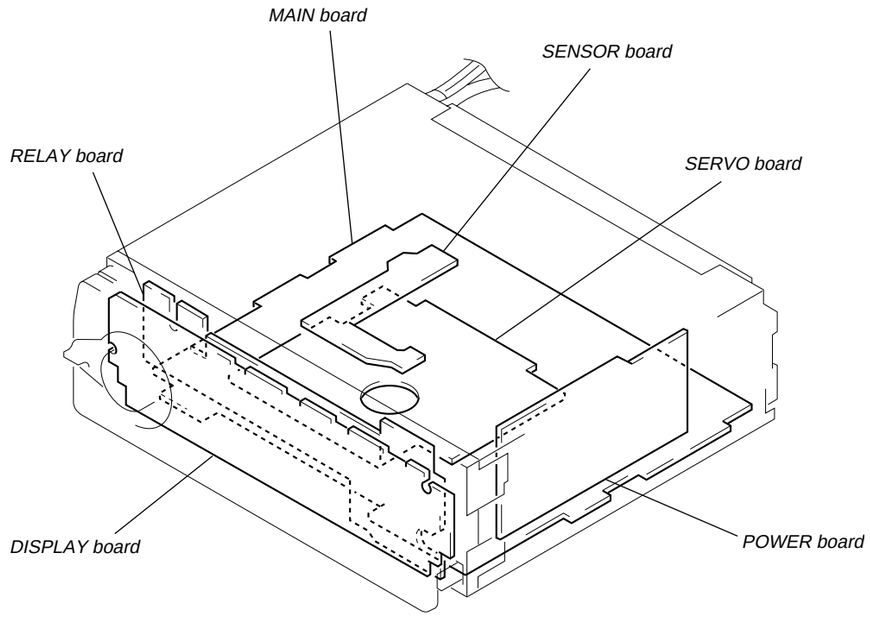
Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

Note on Schematic Diagram:
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

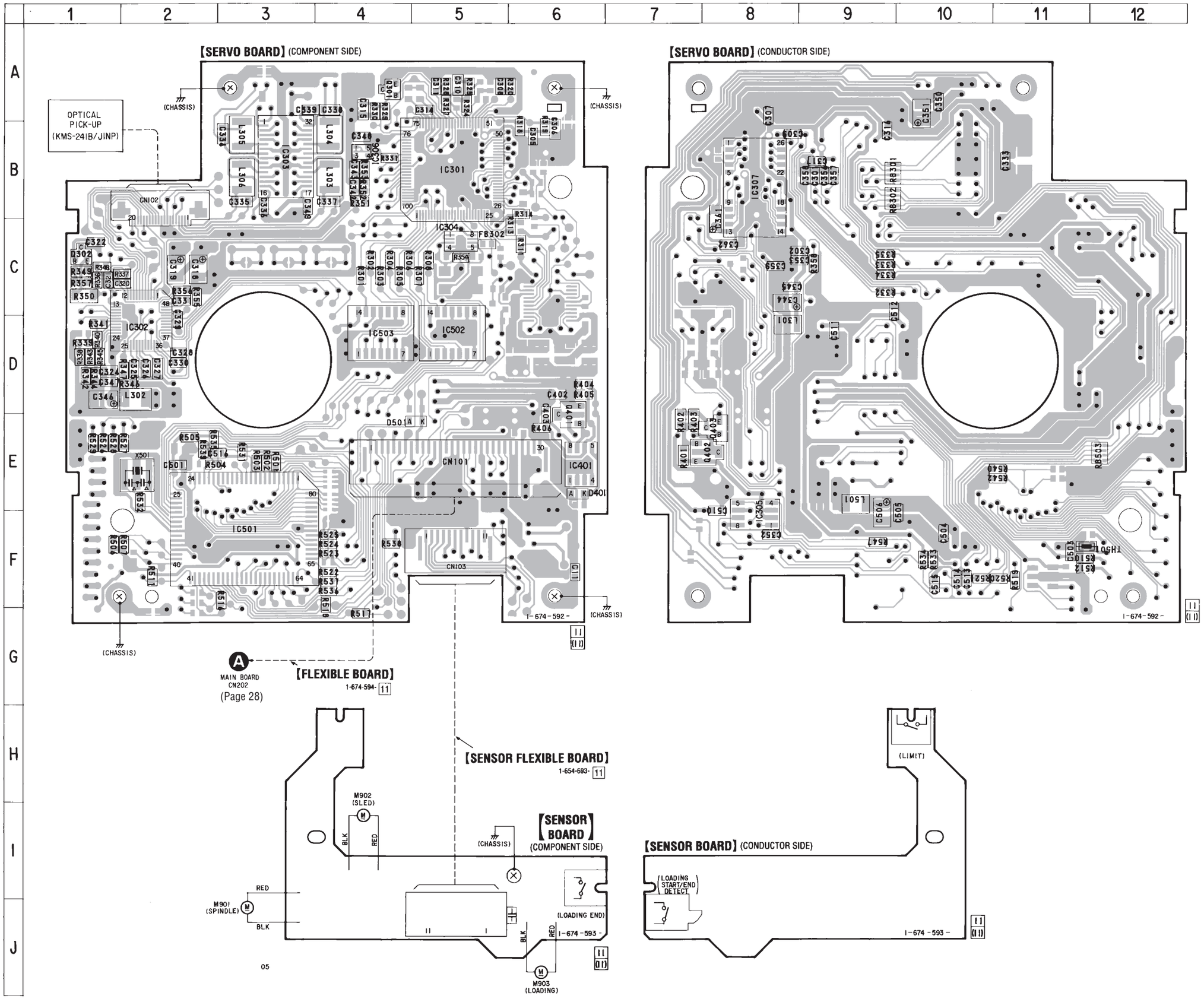
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- B+ : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - ⇨ : FM
  - ➡ : AM
  - Σ : MD

• Circuit Boards Location



4-7. PRINTED WIRING BOARD – SERVO/SENSOR Boards – • See page 24 for Circuit Boards Location.

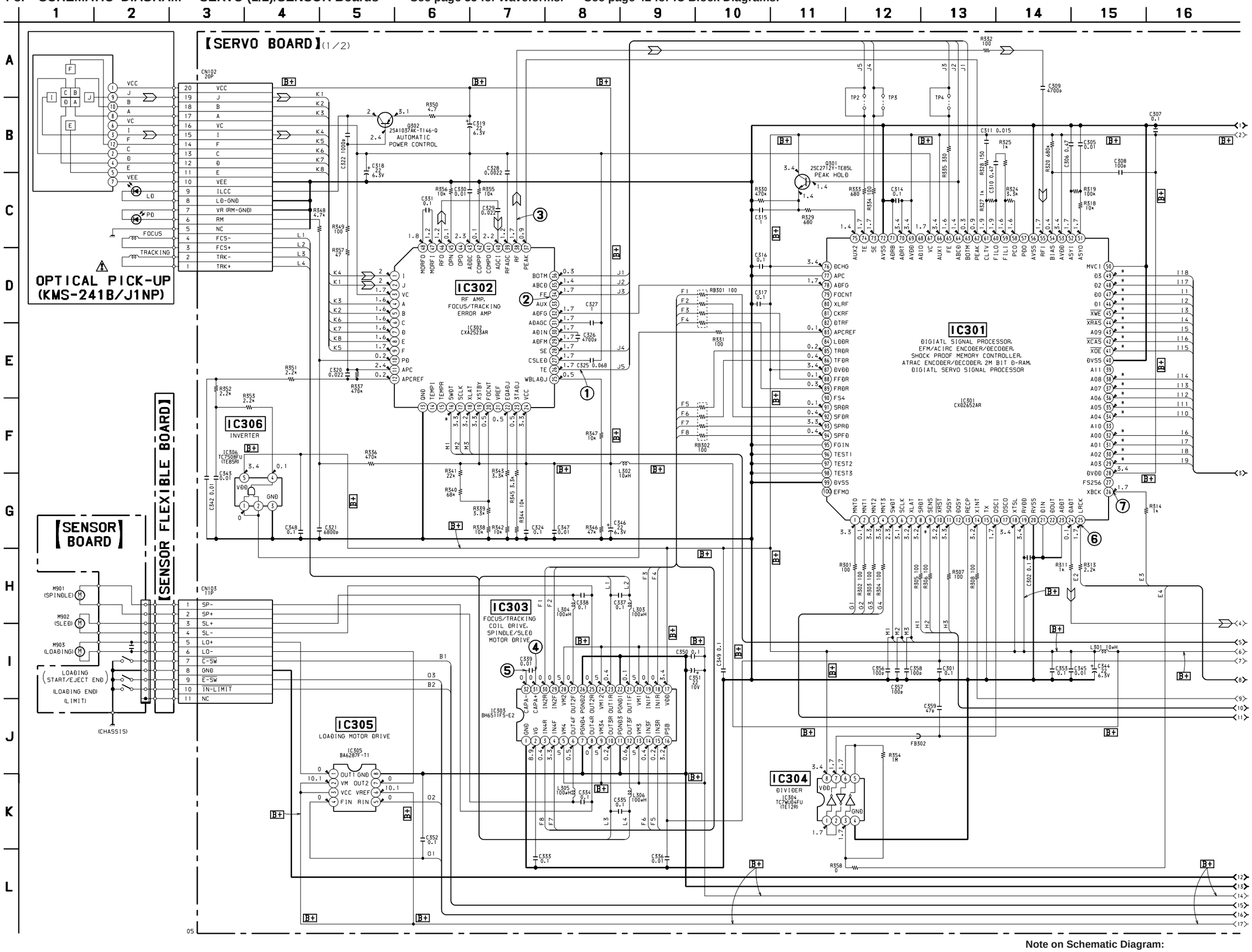


- **Semiconductor Location**

Ref. No.	Location
D401	E-6
D501	E-5
IC301	B-5
IC302	D-2
IC303	B-3
IC304	C-5
IC305	F-8
IC306	B-4
IC307	B-8
IC401	E-6
IC501	F-3
IC502	D-5
IC503	D-4
Q301	A-4
Q302	C-1
Q401	E-6
Q402	E-8
Q403	E-8

4-8. SCHEMATIC DIAGRAM – SERVO (1/2)/SENSOR Boards –

• See page 35 for Waveforms. • See page 42 for IC Block Diagrams.



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

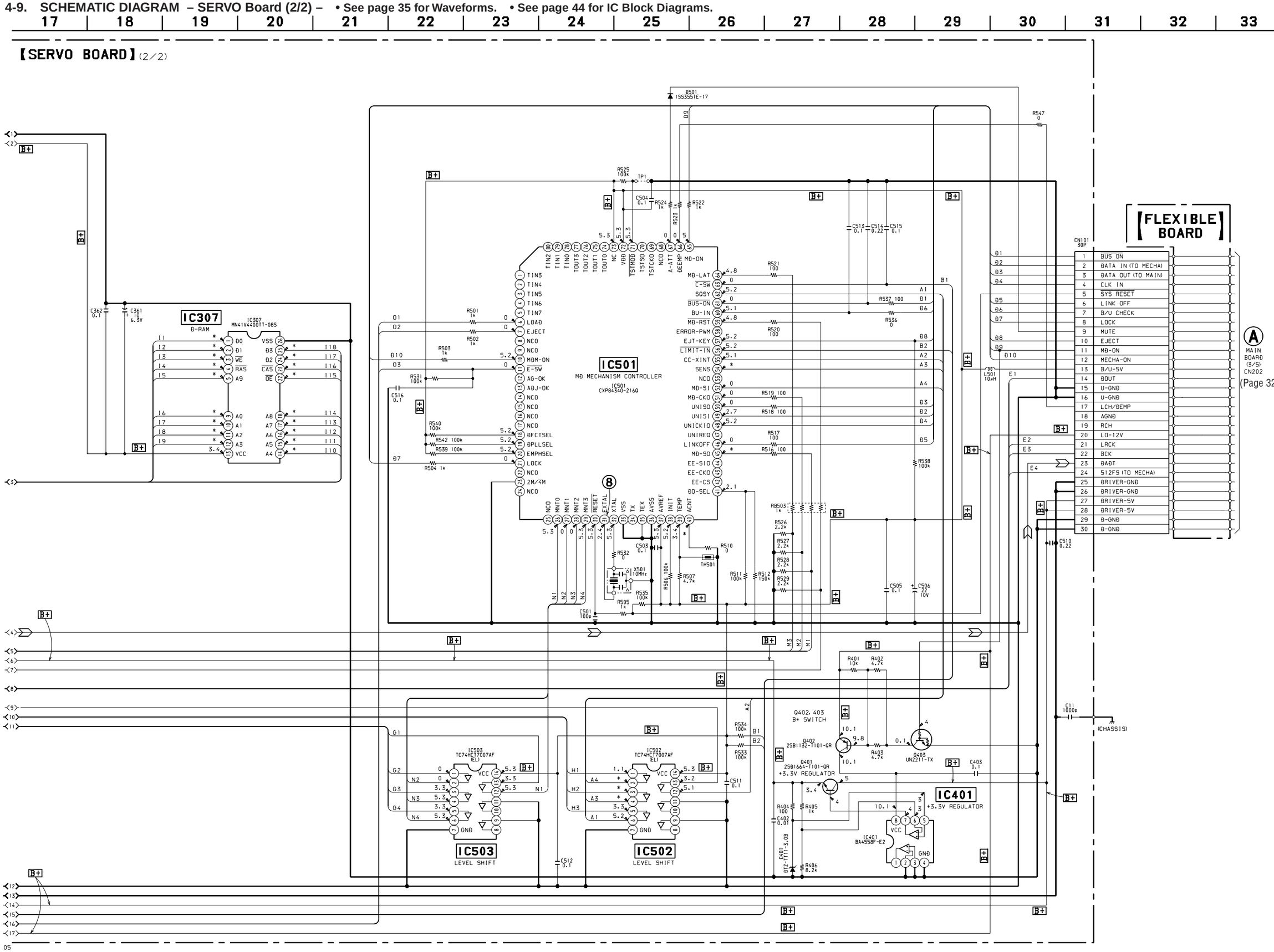
Note on Schematic Diagram:

- Voltages and waveforms are dc with respect to ground in playback mode.
  no mark : MD
  * : Impossible to measure

4-9. SCHEMATIC DIAGRAM – SERVO Board (2/2) –

• See page 35 for Waveforms. • See page 44 for IC Block Diagrams.

【SERVO BOARD】(2/2)

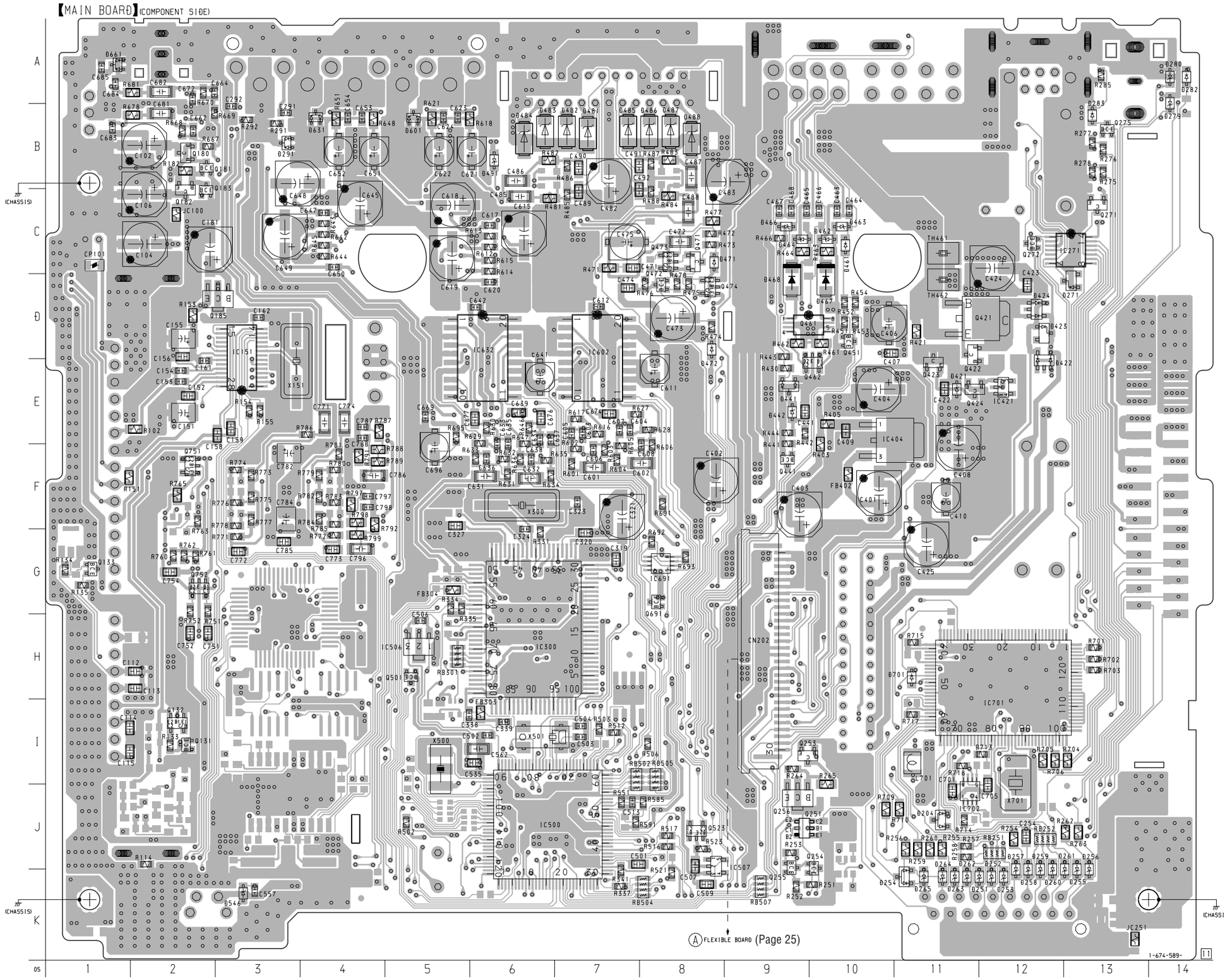


4-10. PRINTED WIRING BOARD – MAIN Board (Component Side) –

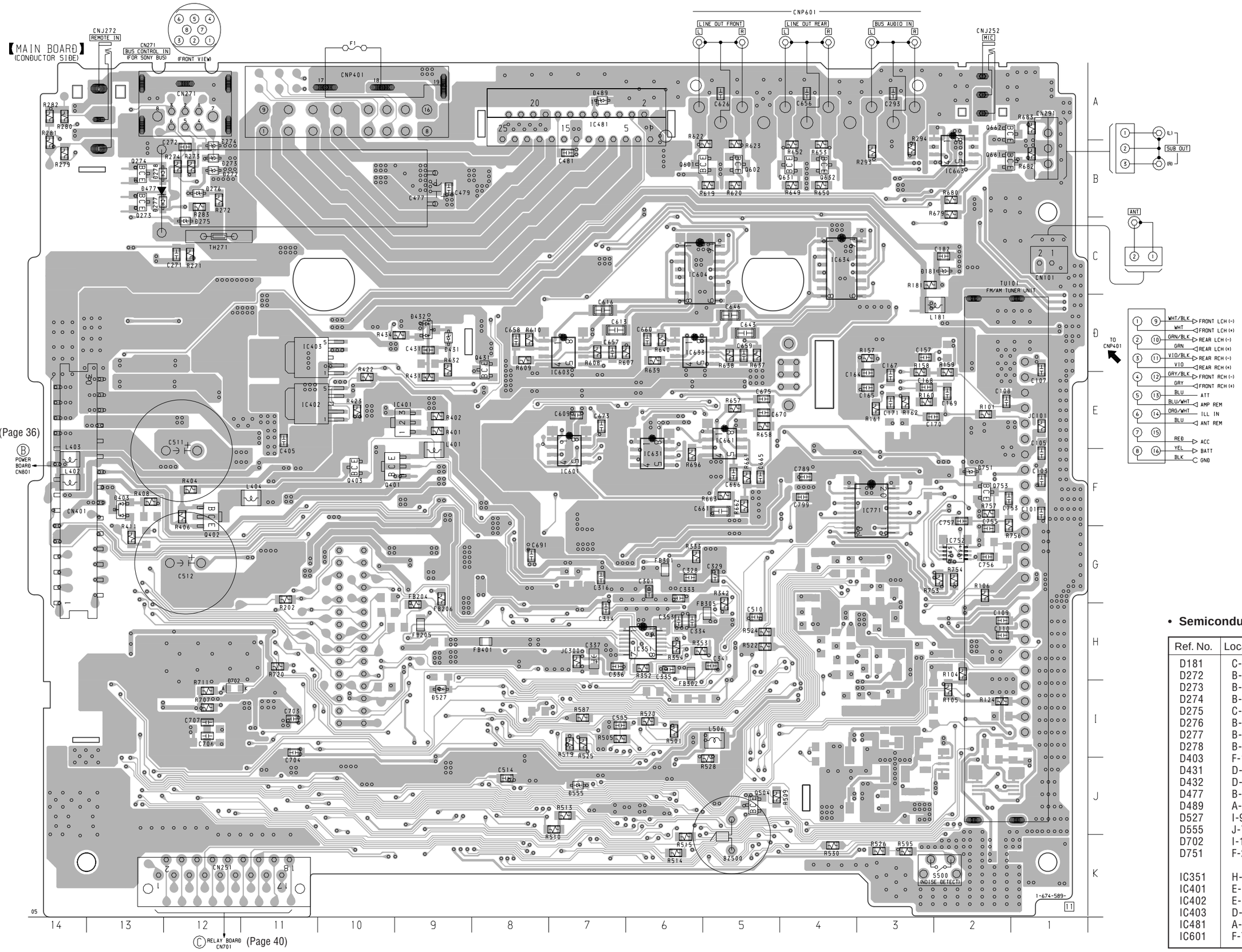
• See page 24 for Circuit Boards Location.

• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D204	J-11	D701	H-11
D251	K-12	IC151	E-3
D252	K-12	IC271	C-13
D253	K-12	IC300	H-6
D254	K-11	IC404	E-10
D255	K-13	IC421	E12
D256	K-13	IC500	J-6
D257	K-12	IC506	H-5
D258	K-12	IC507	J-8
D259	K-12	IC602	D-7
D260	K-12	IC632	D-6
D261	K-13	IC691	G-8
D262	K-11	IC701	H-12
D263	K-11	IC702	J-11
D264	K-11		
D265	K-11	Q131	I-2
D271	D-13	Q132	I-2
D279	B-14	Q133	G-1
D280	A-14	Q180	B-2
D282	A-14	Q181	B-2
D283	B-13	Q182	C-2
D291	B-13	Q183	C-2
D421	E-11	Q185	D-3
D422	E-12	Q251	J-9
D423	D-12	Q253	I-9
D424	D-12	Q254	J-10
D441	E-9	Q255	J-9
D442	E-9	Q256	J-9
D461	C-10	Q271	C-13
D462	C-10	Q272	C-12
D463	C-10	Q275	B-13
D464	C-9	Q421	D-11
D466	C-9	Q422	D-11
D471	C-8	Q423	E-11
D472	D-8	Q424	E-11
D481	B-7	Q441	F-9
D482	B-7	Q451	D-10
D483	B-6	Q461	D-9
D484	B-6	Q462	E-10
D485	B-7	Q471	C-8
D486	B-8	Q472	D-8
D487	B-8	Q473	C-8
D488	B-8	Q474	D-8
D491	B-6	Q501	H-5
D546	K-3	Q523	J-8
D601	B-5	Q691	G-8
D631	B-4	Q751	F-2
D661	A-1	Q752	G-2



4-11. PRINTED WIRING BOARD – MAIN Board (Conductor Side) – • See page 24 for Circuit Boards Location.

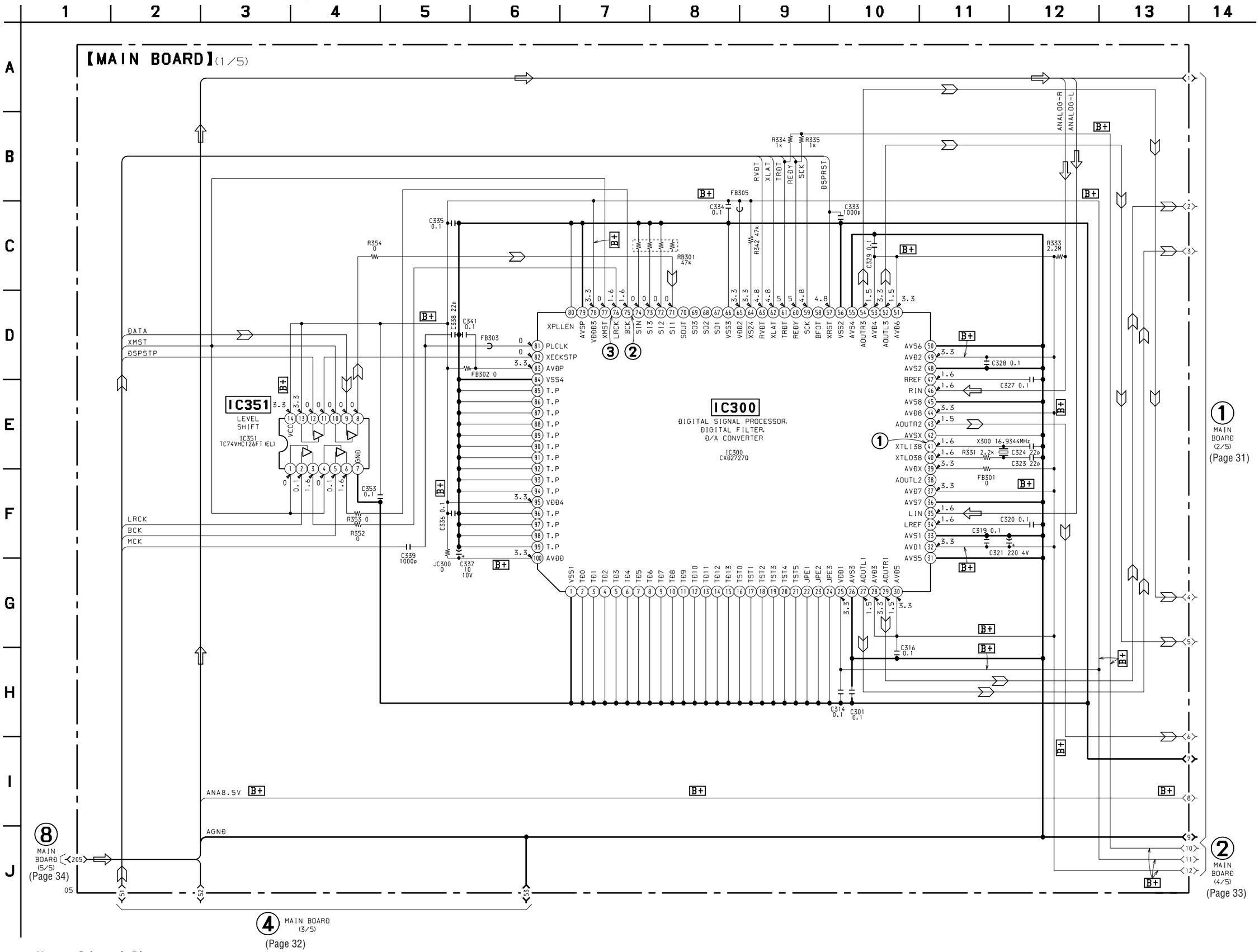


- **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D181	C-2	IC603	D-7
D272	B-12	IC604	C-6
D273	B-12	IC631	F-6
D274	B-12	IC633	D-6
D275	C-12	IC634	C-4
D276	B-12	IC661	E-5
D277	B-13	IC663	B-2
D278	B-13	IC752	G-2
D403	F-13	IC771	F-3
D431	D-9		
D432	D-9	Q273	B-13
D477	B-13	Q274	B-13
D489	A-7	Q401	F-9
D527	I-9	Q402	F-12
D555	J-7	Q403	F-10
D702	I-11	Q431	D-8
D751	F-2	Q504	J-5
		Q601	B-5
IC351	H-6	Q602	B-5
IC401	E-9	Q631	B-4
IC402	E-10	Q632	B-4
IC403	D-10	Q661	B-2
IC481	A-7	Q662	A-2
IC601	F-7	Q753	F-2

4-12. SCHEMATIC DIAGRAM – MAIN Board (1/5) –

• See page 35 for Waveforms. • See page 46 for IC Block Diagrams.

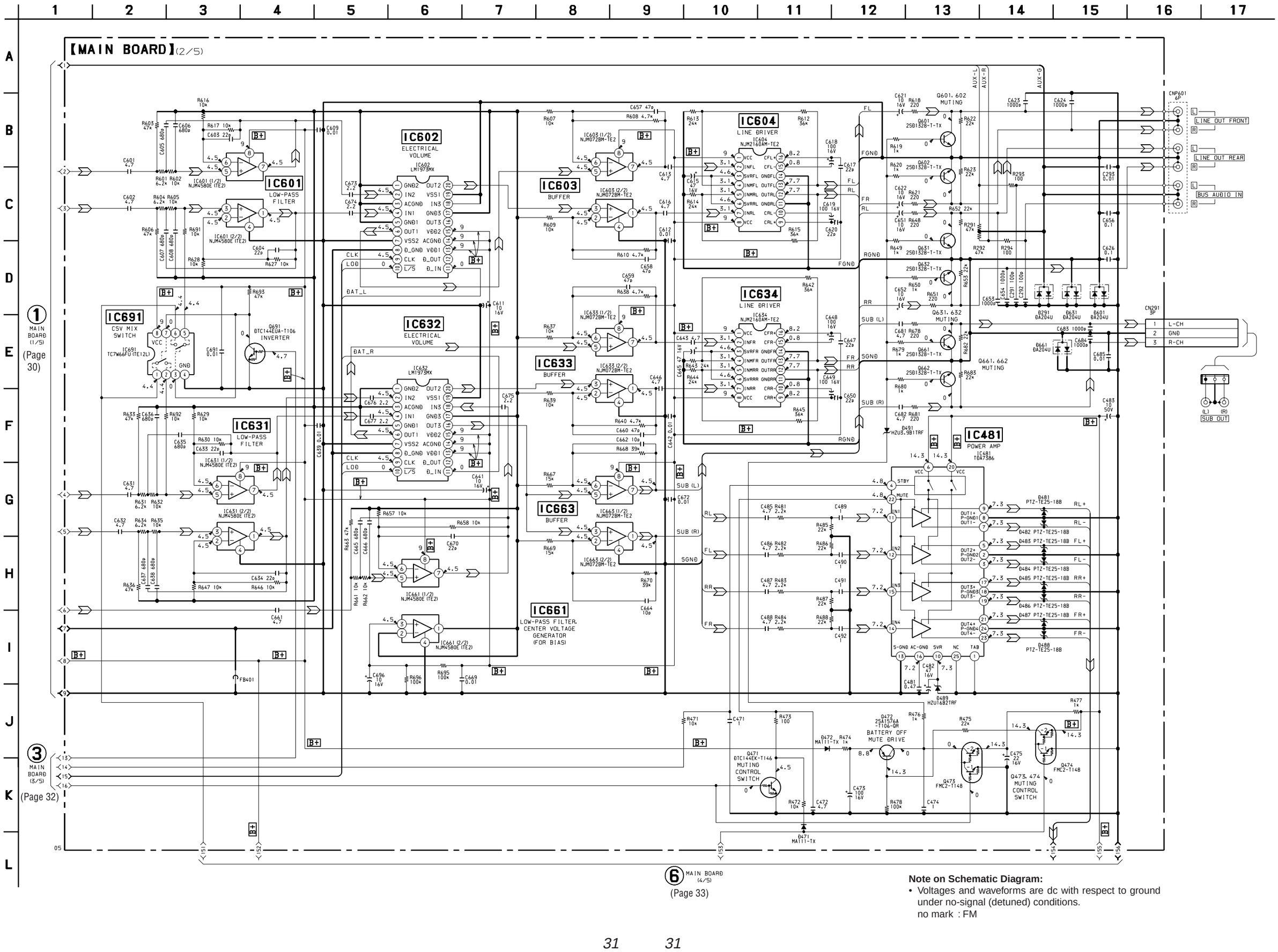


Note on Schematic Diagram:

- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM

4-13. SCHEMATIC DIAGRAM – MAIN Board (2/5) –

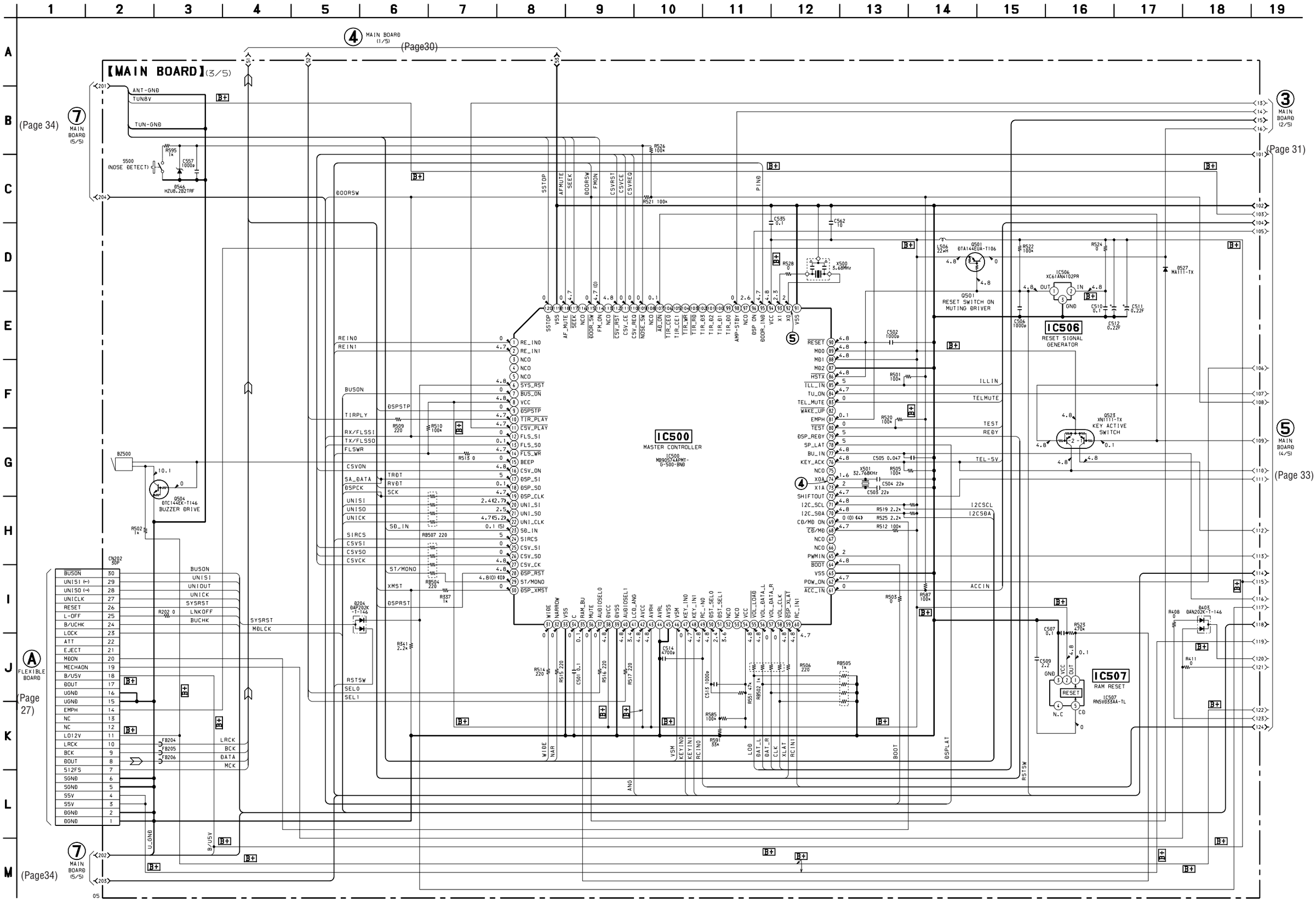
• See page 46 for IC Block Diagrams.



Note on Schematic Diagram:

- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM

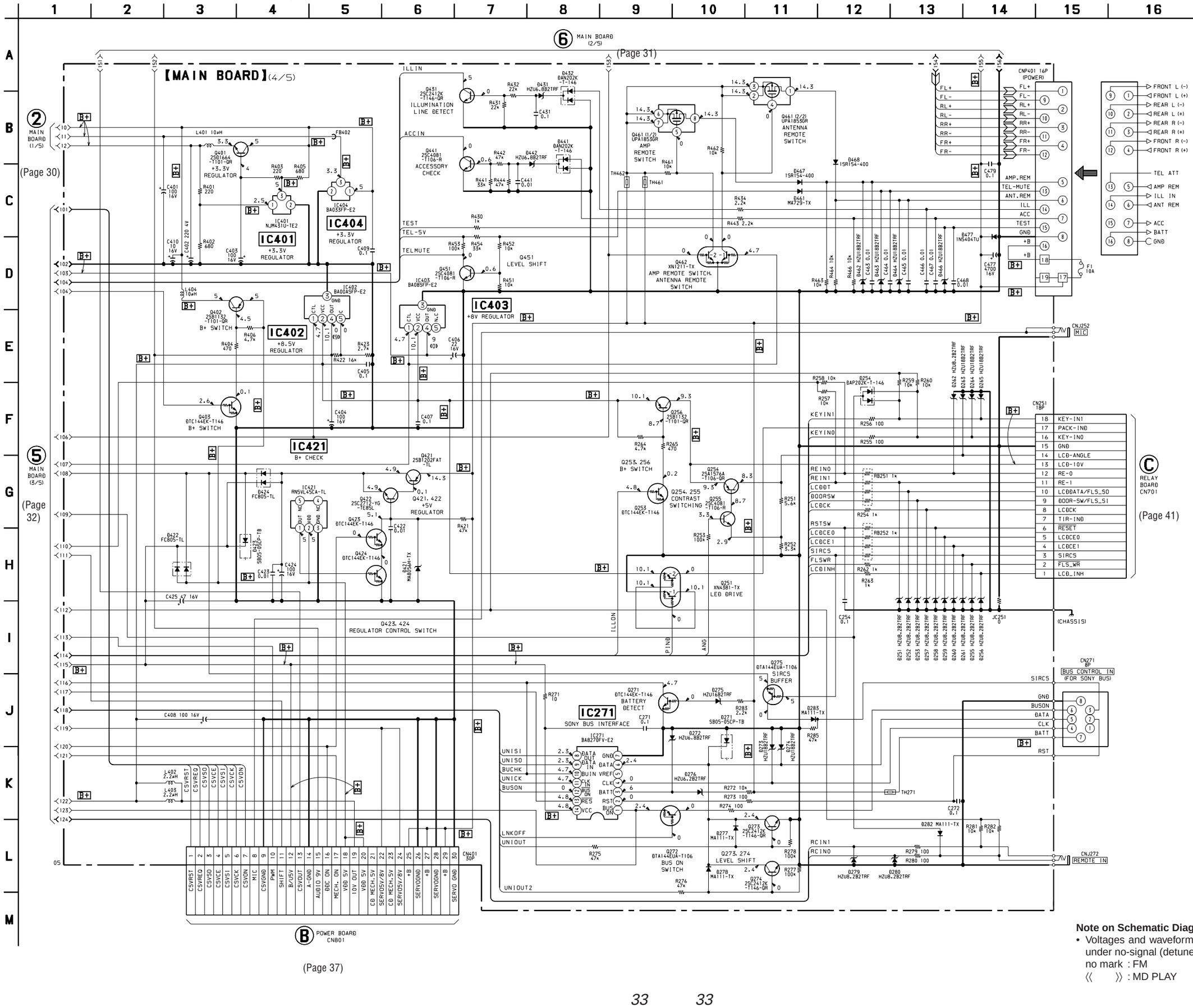
4-14. SCHEMATIC DIAGRAM – MAIN Board (3/5) – • See page 35 for Waveforms.



Note on Schematic Diagram:

- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : AM
  ⟨⟨ ⟩⟩ : MD PLAY

4-15. SCHEMATIC DIAGRAM – MAIN Board (4/5) – • See page 45 for IC Block Diagrams.

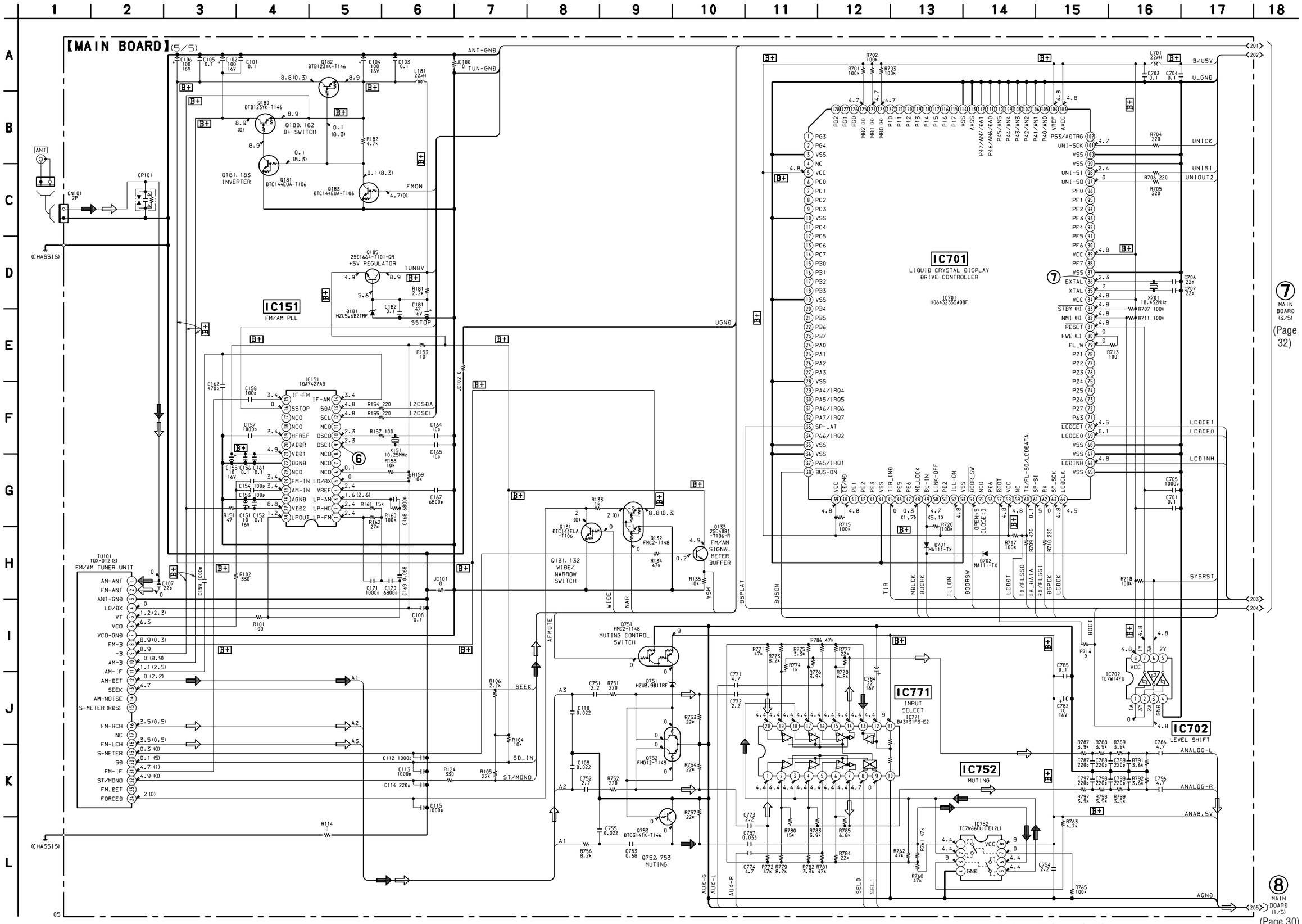


Note on Schematic Diagram:

- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ⟨⟨ ⟩⟩ : MD PLAY

4-16. SCHEMATIC DIAGRAM – MAIN Board (5/5) –

• See page 35 for Waveforms. • See page 45 for IC Block Diagrams.



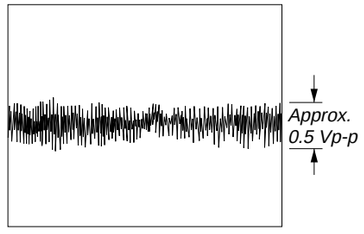
Note on Schematic Diagram:

- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : AM
  ⟨⟨ ⟩⟩ : MD PLAY

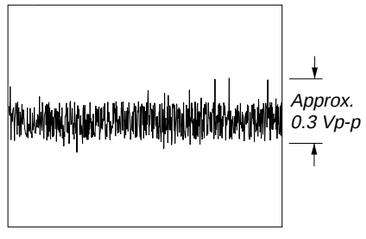
• Waveforms

– SERVO Board –

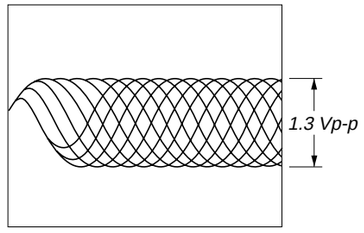
❶ IC302 ㉖ (TE) (MD PLAY)



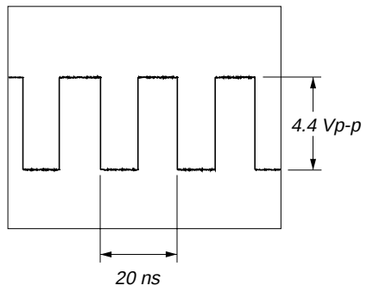
❷ IC302 ㉞ (FE) (MD PLAY)



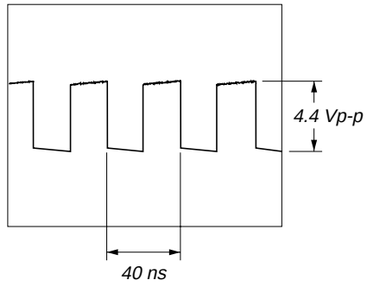
❸ IC302 ㊳ (RF) (MD PLAY)



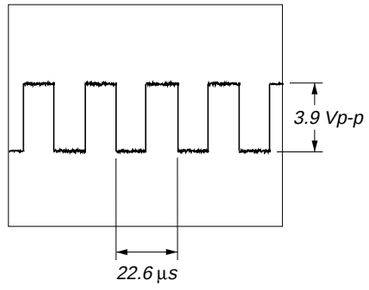
❹ IC303 ㉛ (CAPA+) (MD PLAY)



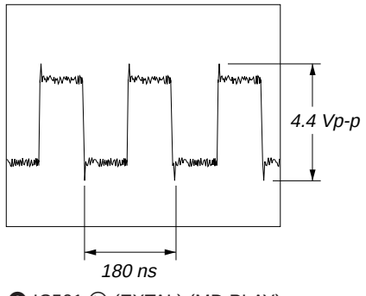
❺ IC303 ㉜ (CAPA–) (MD PLAY)



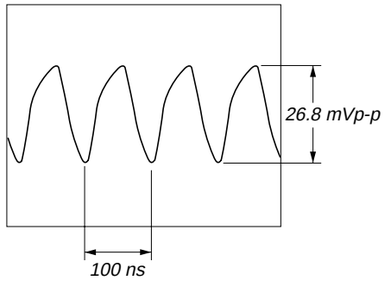
❻ IC301 ㉕ (LRCK) (MD PLAY)



❼ IC301 ㉘ (XBCK) (MD PLAY)

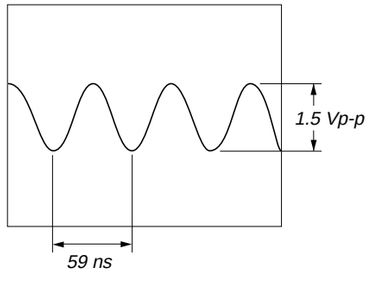


❽ IC501 ㉛ (EXTAL) (MD PLAY)

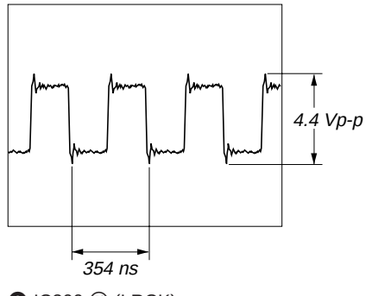


– MAIN Board –

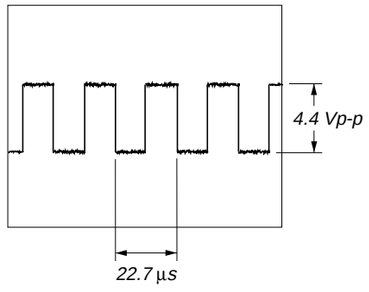
❶ IC300 ㊶ (XTLI38)



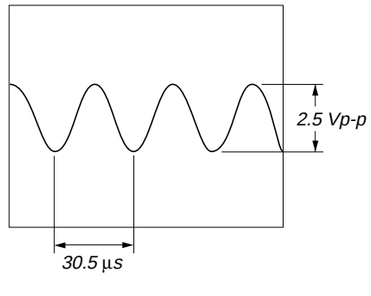
❷ IC300 ㉕ (BCK)



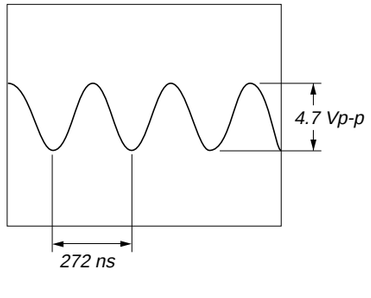
❸ IC300 ㉖ (LRCK)



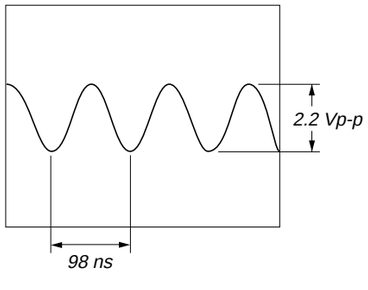
❹ IC500 ㉔ (X0A)



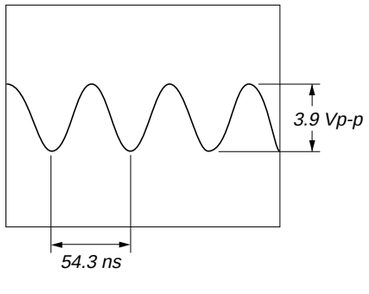
❺ IC500 ㉒ (X0)



❻ IC151 ⑨ (OSCI)

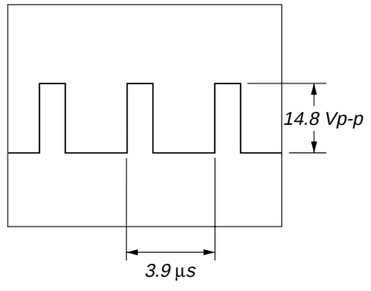


❼ IC701 ㊻ (EXTAL)

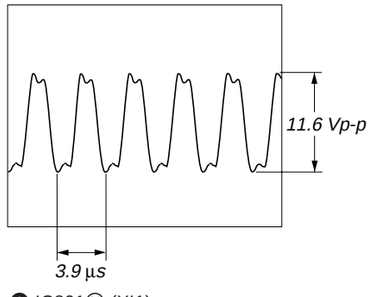


– POWER Board –

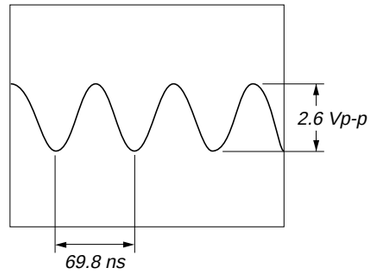
❶ Q833 ⑤ to ⑧ (D)



❷ Q883 ④ (GATE)

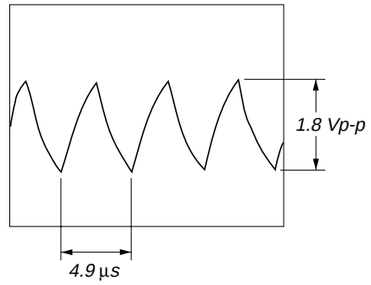


❸ IC801⑳ (XI1)

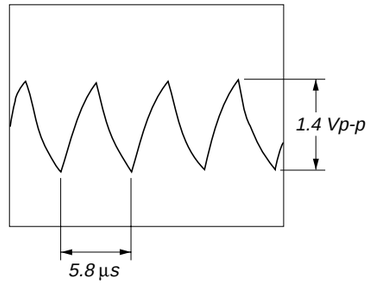


– DISPLAY Board –

❶ IC900 ⑳ (OSC-IN)



❷ IC920 ⑫ (OSC-IN)

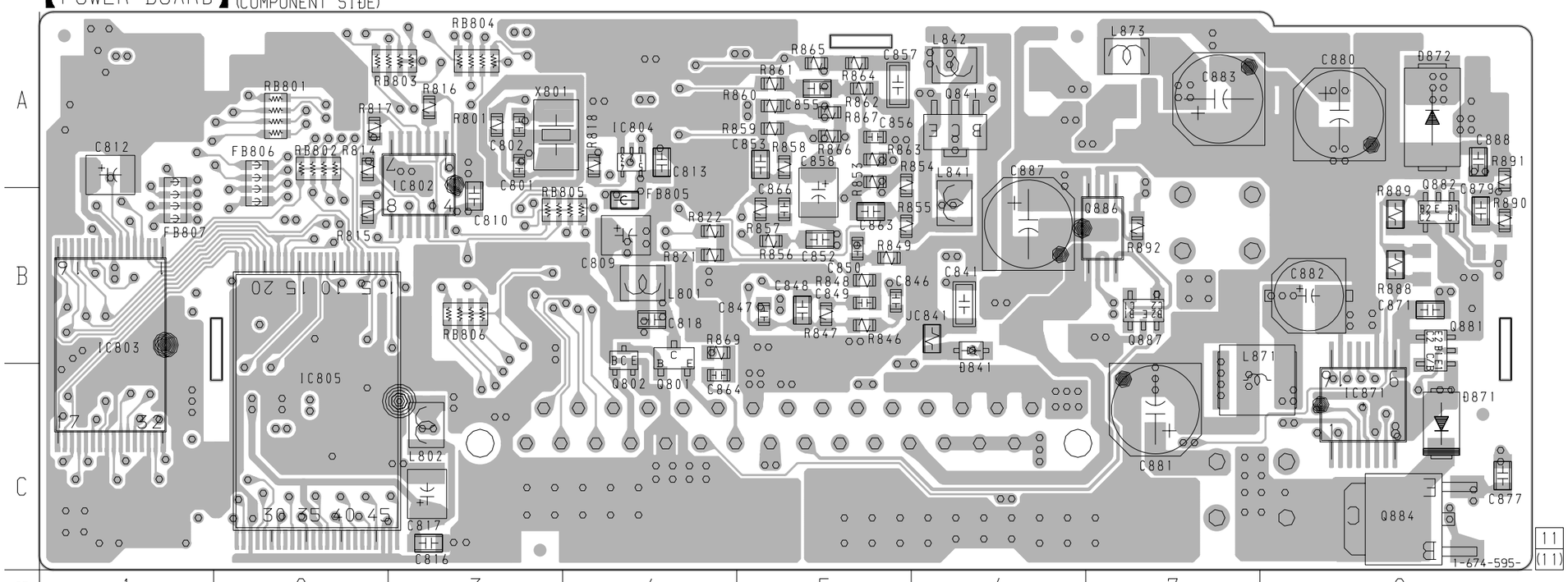


4-17. PRINTED WIRING BOARD – POWER Board – • See page 24 for Circuit Boards Location.

• **Semiconductor Location (Component Side)**

Ref. No.	Location
D841	B-6
D871	C-8
D872	A-8
IC802	A-3
IC803	B-1
IC804	A-4
IC805	C-2
IC871	C-8
Q801	B-4
Q802	B-4
Q841	A-6
Q881	B-8
Q882	B-8
Q884	C-8
Q886	B-7
Q887	B-7

【POWER BOARD】(COMPONENT SIDE)



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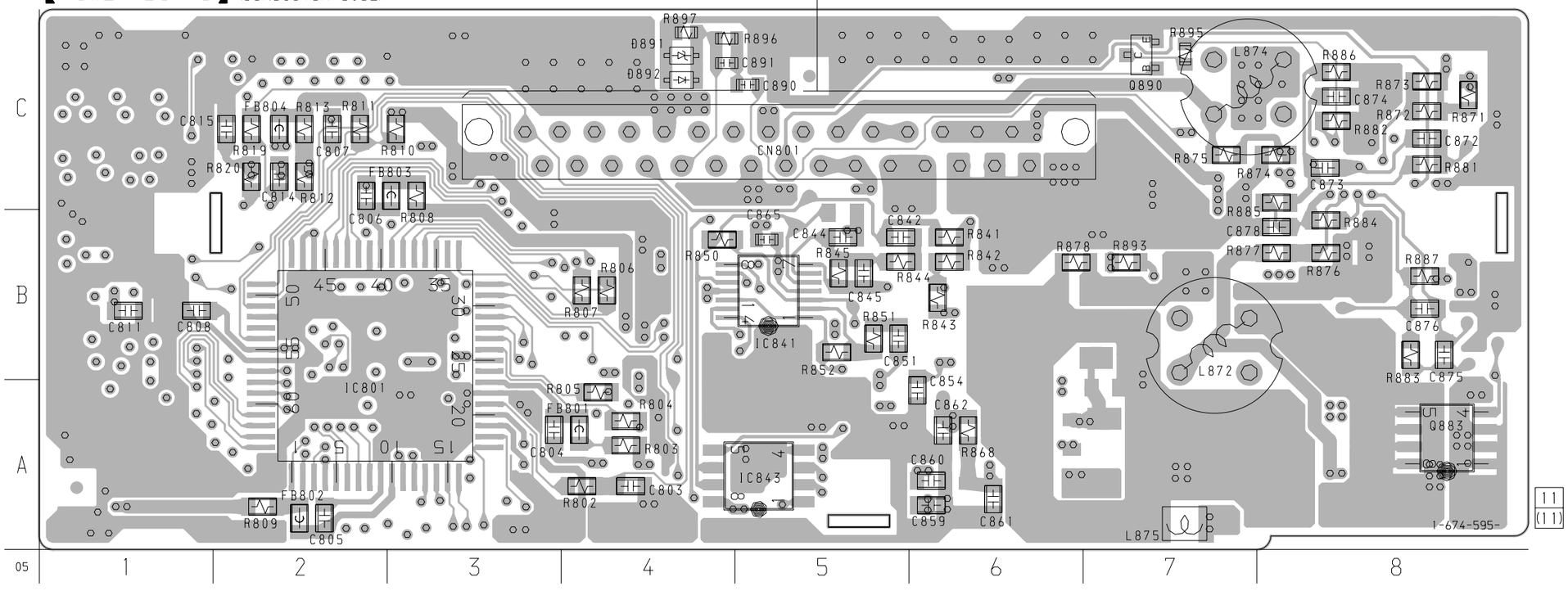
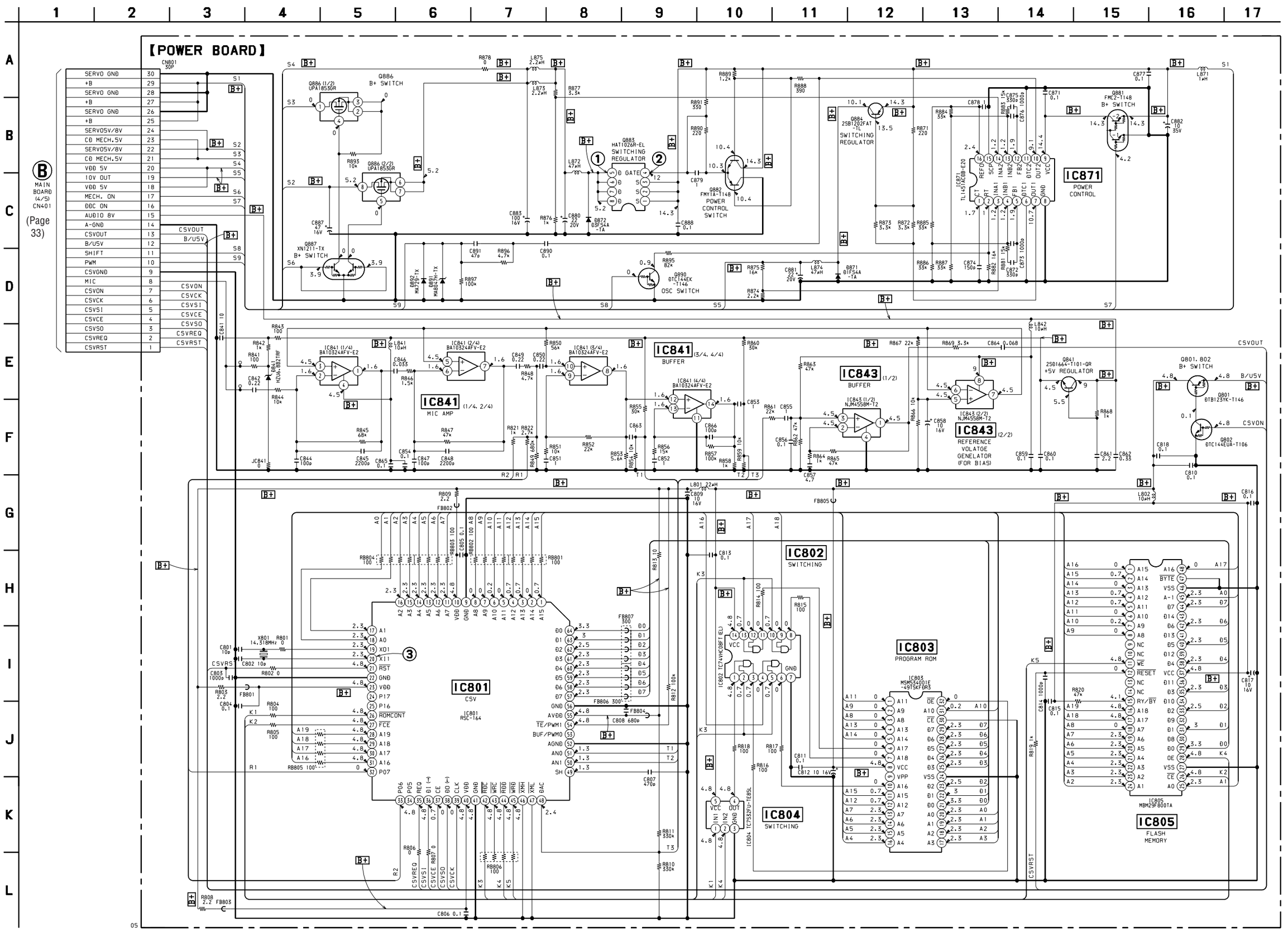
• **Semiconductor Location (Conductor Side)**

Ref. No.	Location
D891	C-4
D892	C-4
IC801	B-2
IC841	B-5
IC843	A-5
Q883	A-8
Q890	C-7

【POWER BOARD】(CONDUCTOR SIDE)



4-18. SCHEMATIC DIAGRAM – POWER Board – • See page 35 for Waveforms. • See page 47 for IC Block Diagrams.



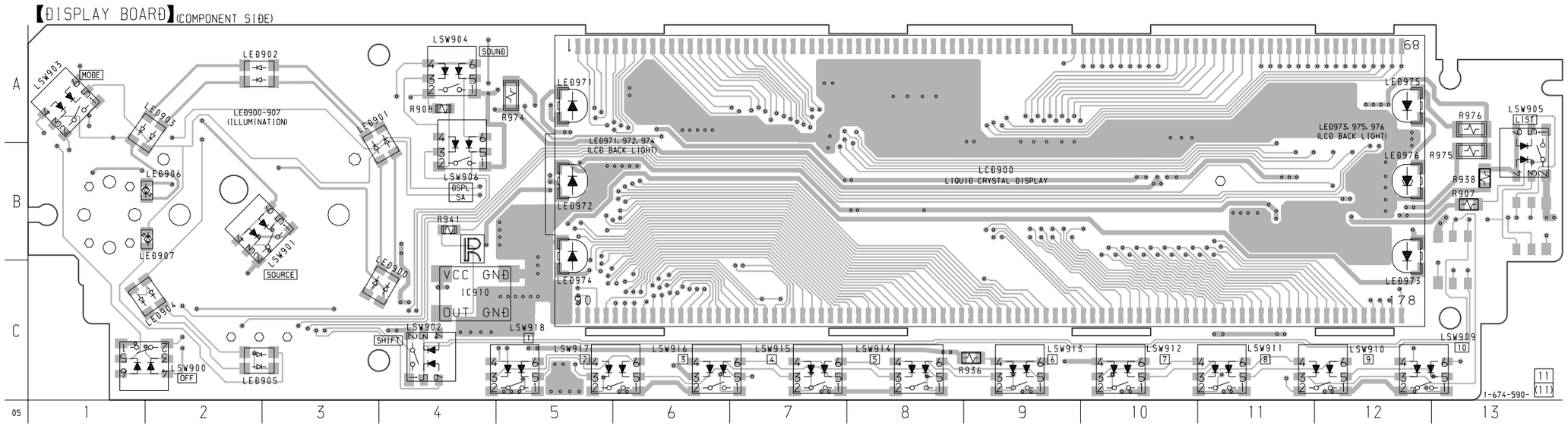
Note on Schematic Diagram:

- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM

4-19. PRINTED WIRING BOARD – DISPLAY Board – • See page 24 for Circuit Boards Location.

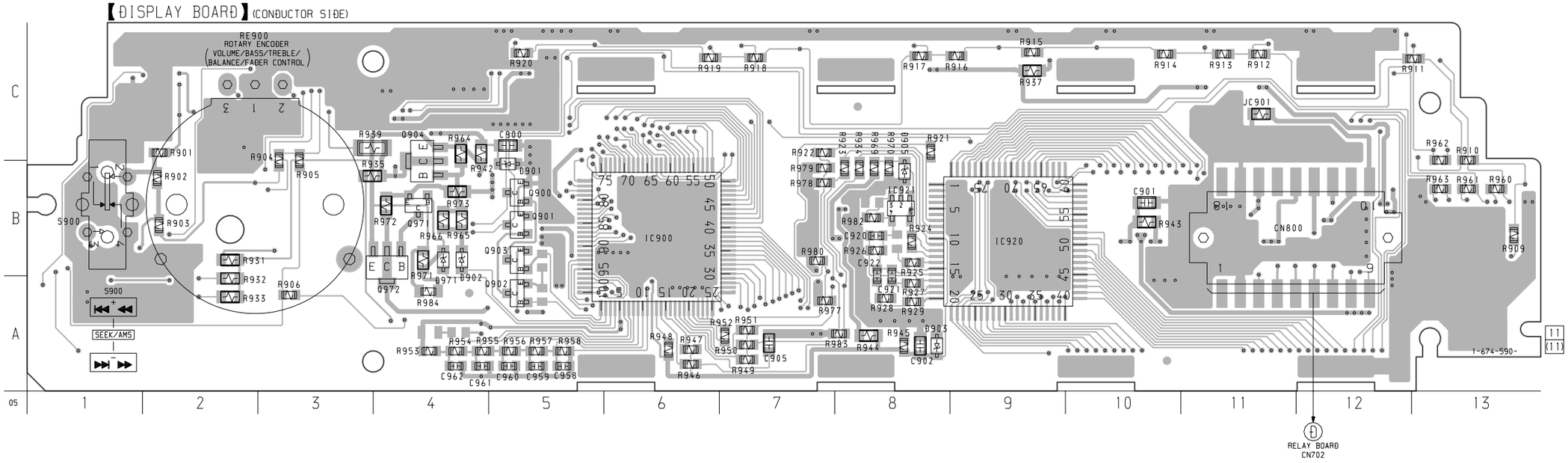
• **Semiconductor Location (Component Side)**

Ref. No.	Location
IC910	C-4
LED900	C-4
LED901	B-4
LED902	A-3
LED903	A-2
LED904	C-2
LED905	C-2
LED906	B-2
LED907	B-2
LED971	A-5
LED972	B-5
LED973	C-12
LED974	C-5
LED975	A-12
LED976	B-12



• **Semiconductor Location (Conductor Side)**

Ref. No.	Location
D901	B-5
D902	B-4
D903	A-8
D905	B-8
D971	B-4
IC900	B-6
IC920	B-9
IC921	B-8
Q900	B-5
Q901	B-5
Q902	A-5
Q903	A-5
Q904	B-4
Q971	B-4
Q972	B-4



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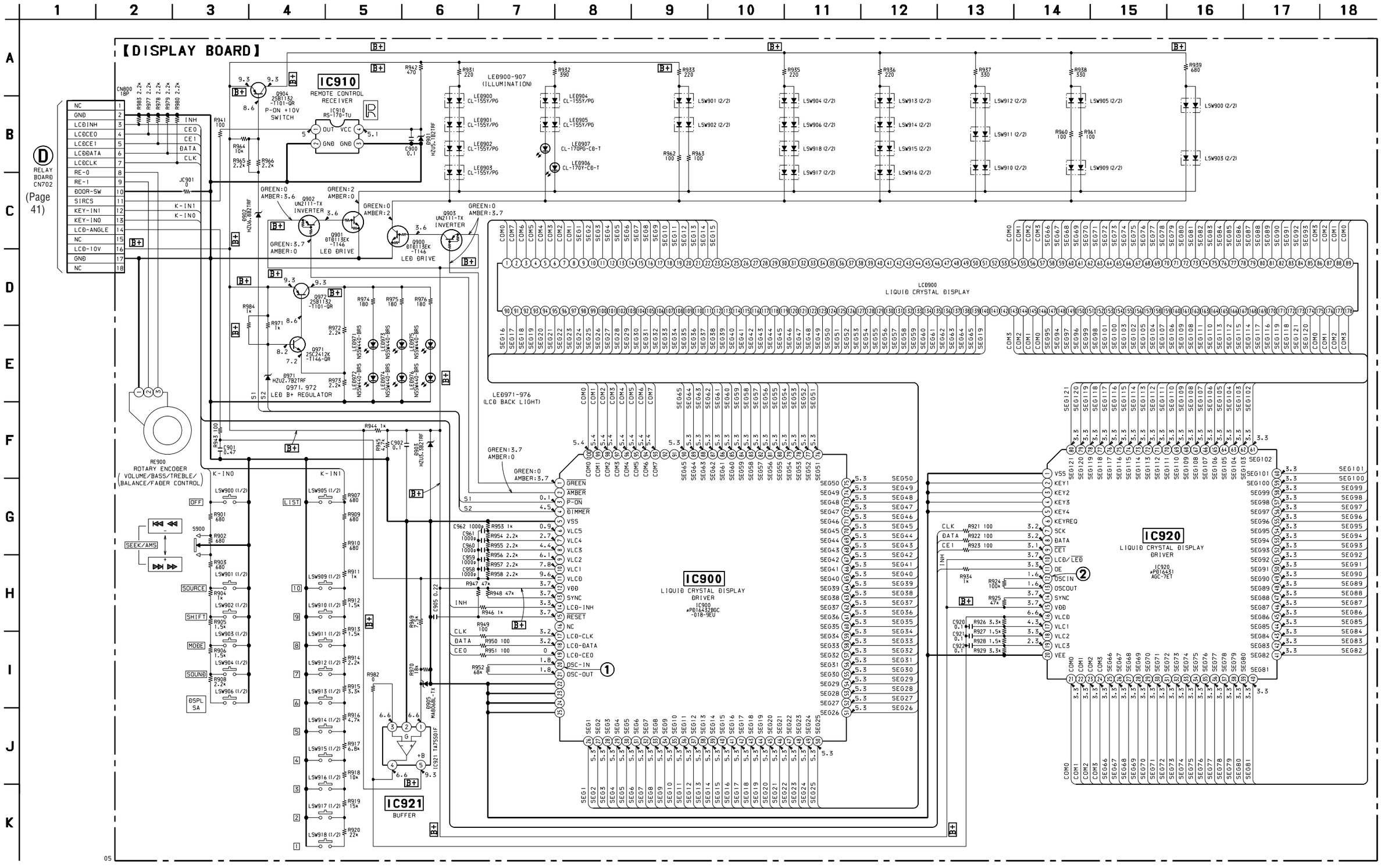
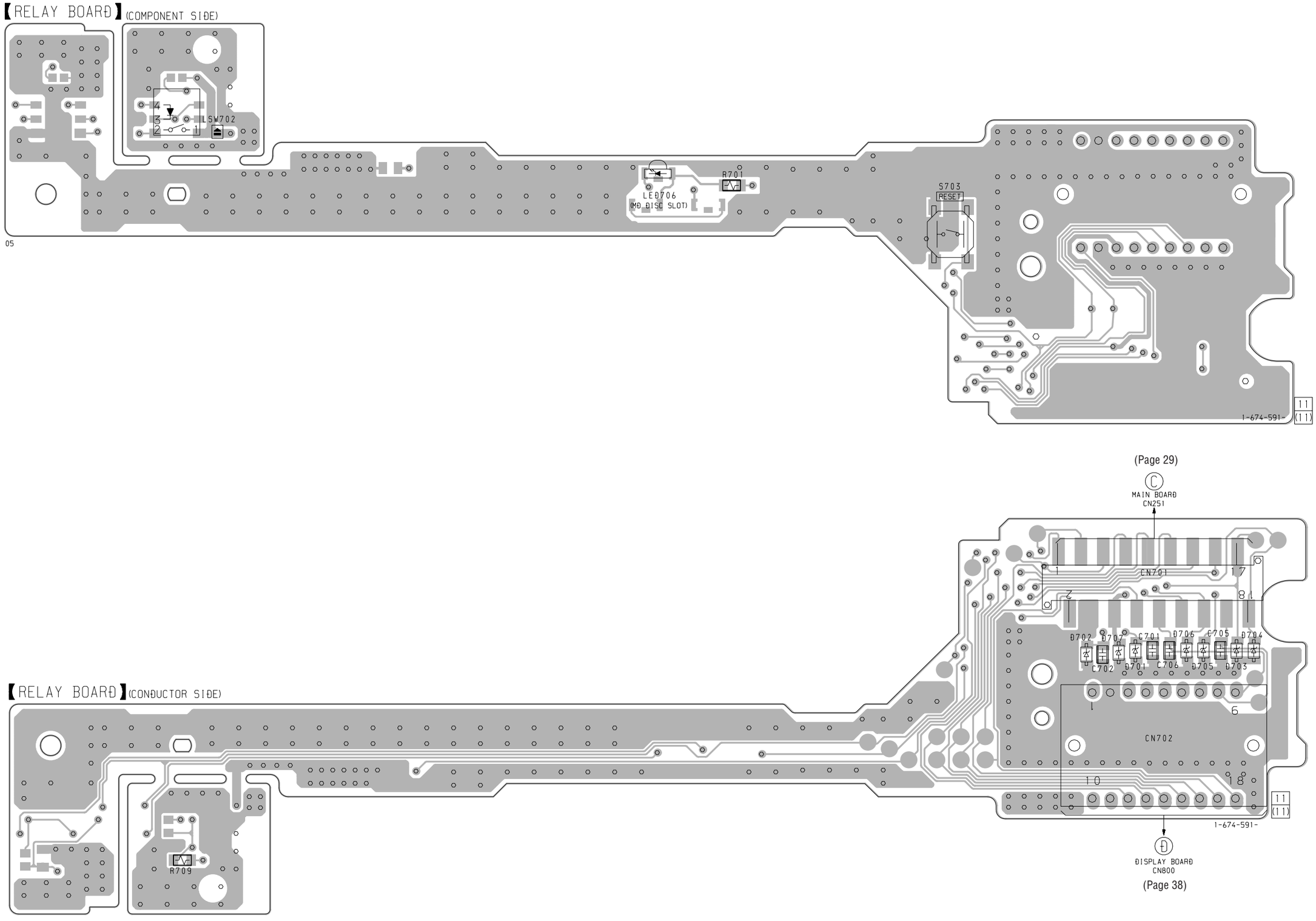
4-20. SCHEMATIC DIAGRAM – DISPLAY Board – • See page 35 for Waveforms.



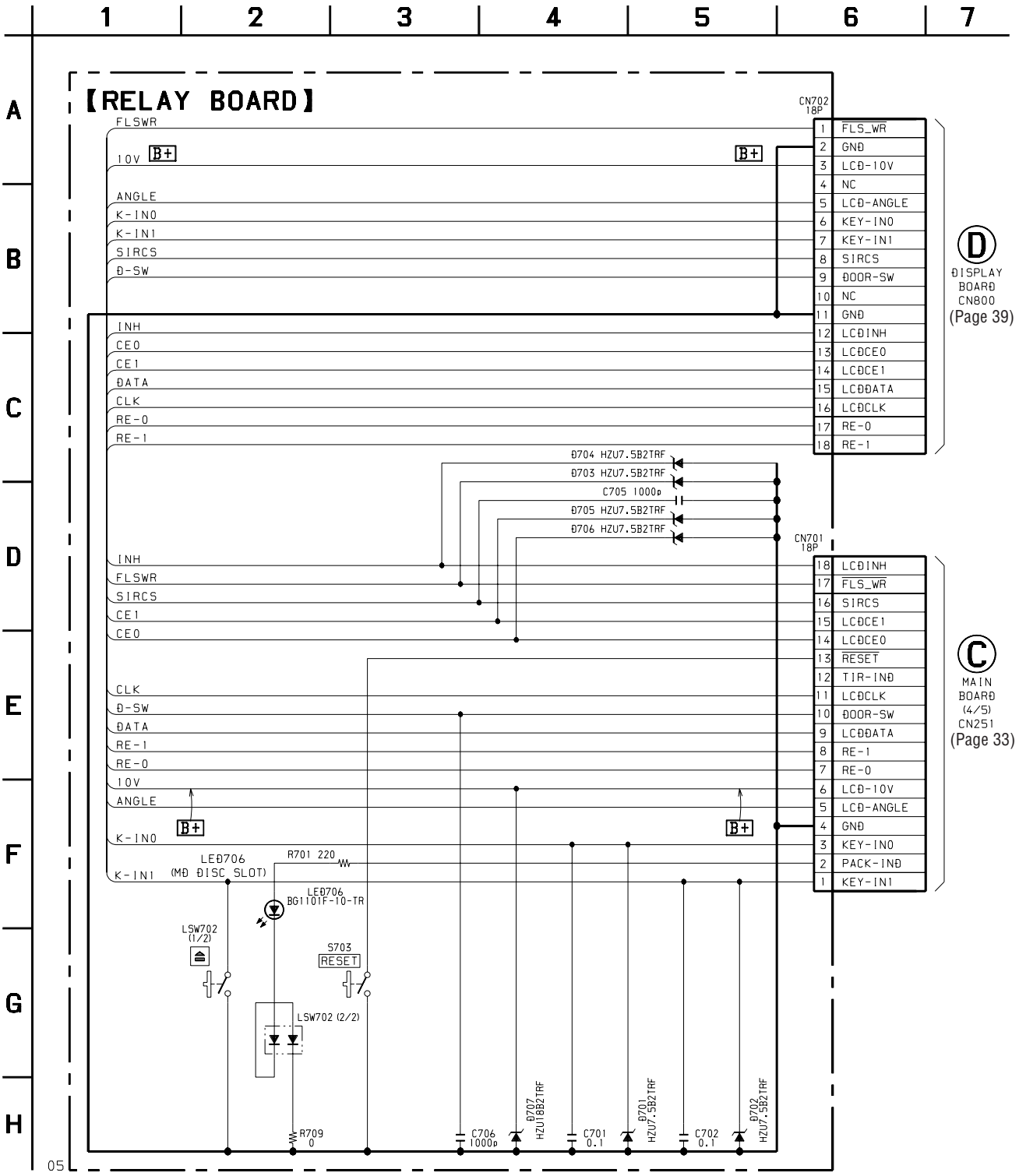
Note on Schematic Diagram:

- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM

4-21. PRINTED WIRING BOARD – RELAY Board – • See page 24 for Circuit Boards Location.

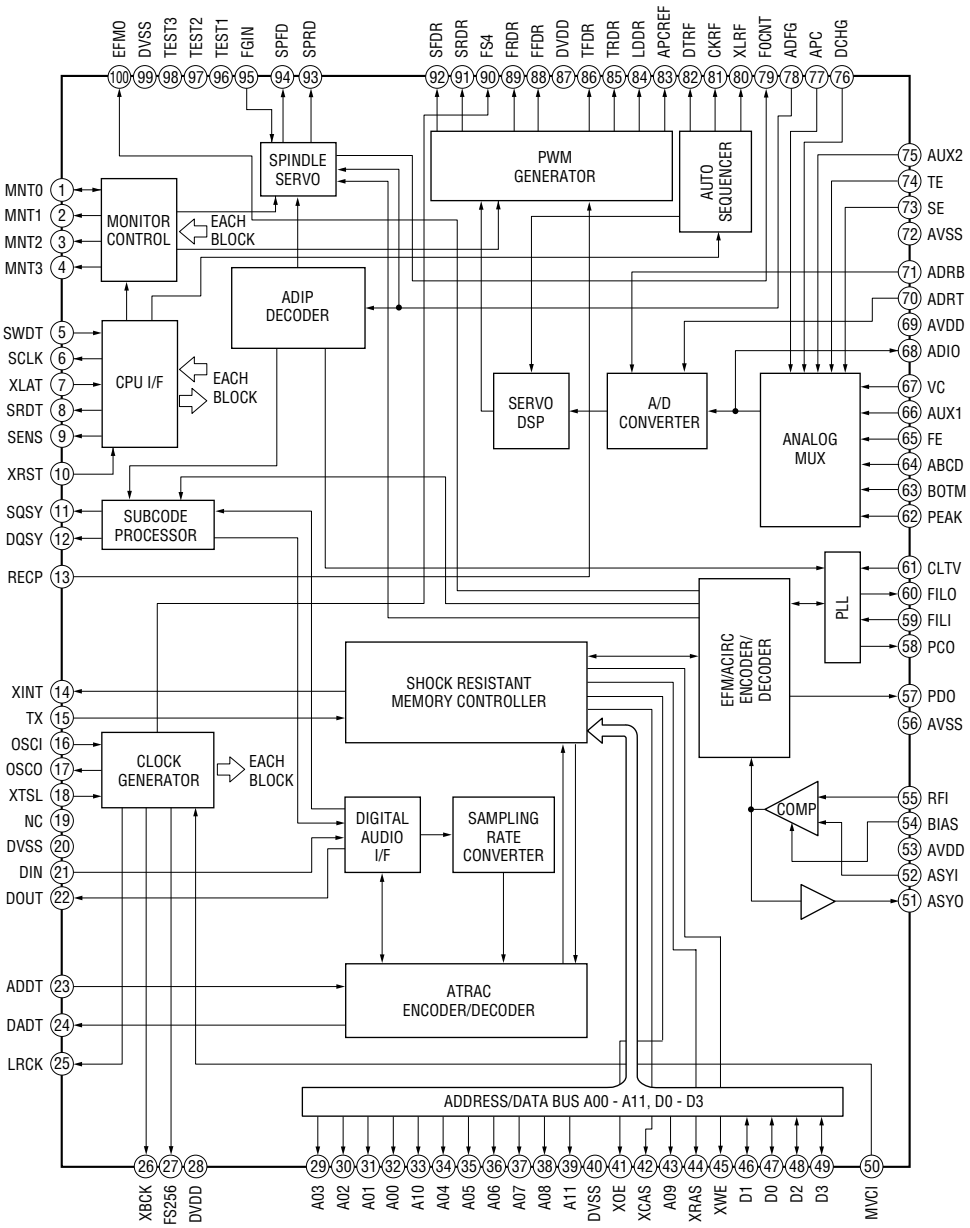


4-22. SCHEMATIC DIAGRAM – RELAY Board –

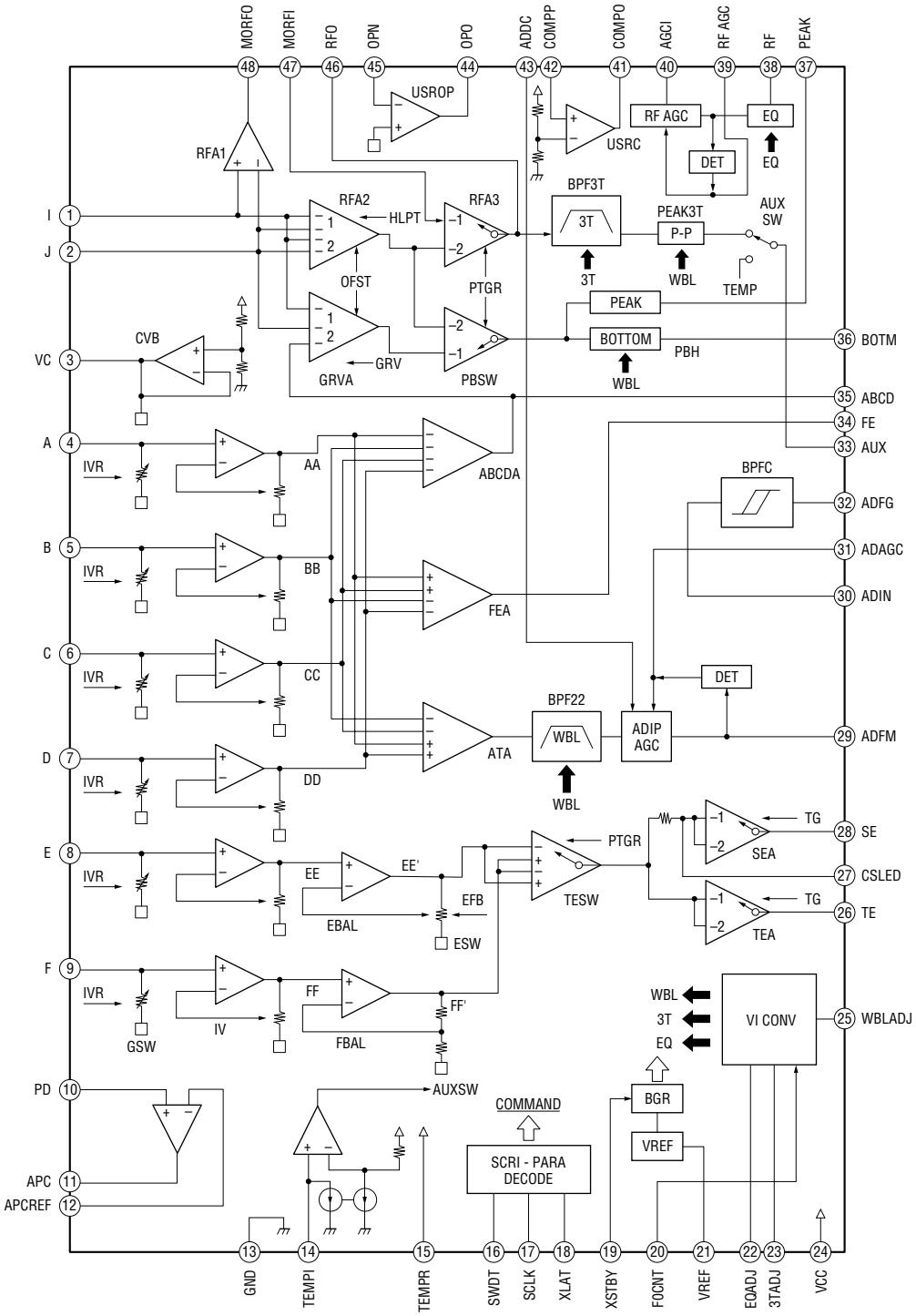


• IC Block Diagrams
– SERVO Board –

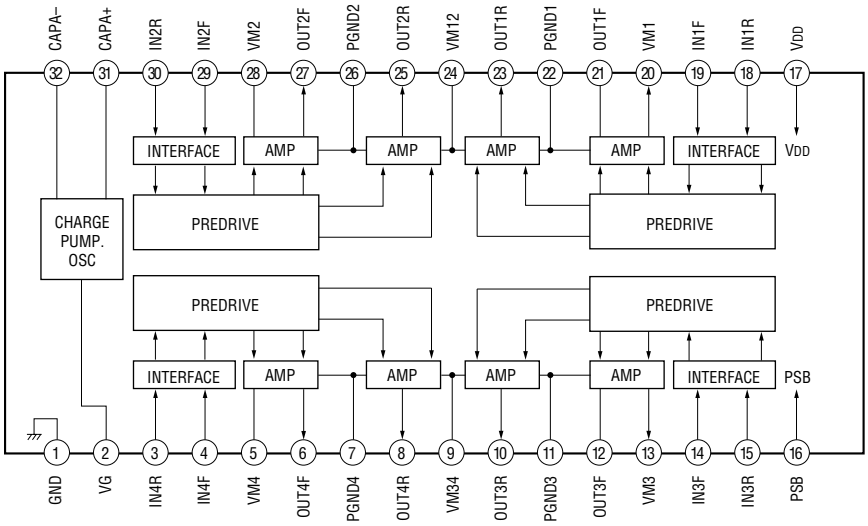
IC301 CXD2652AR



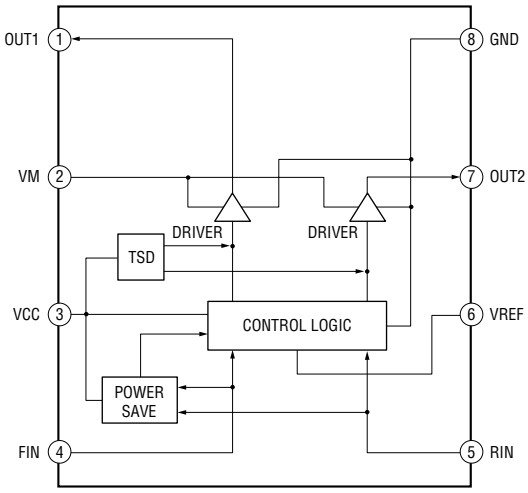
IC302 CXA2523AR



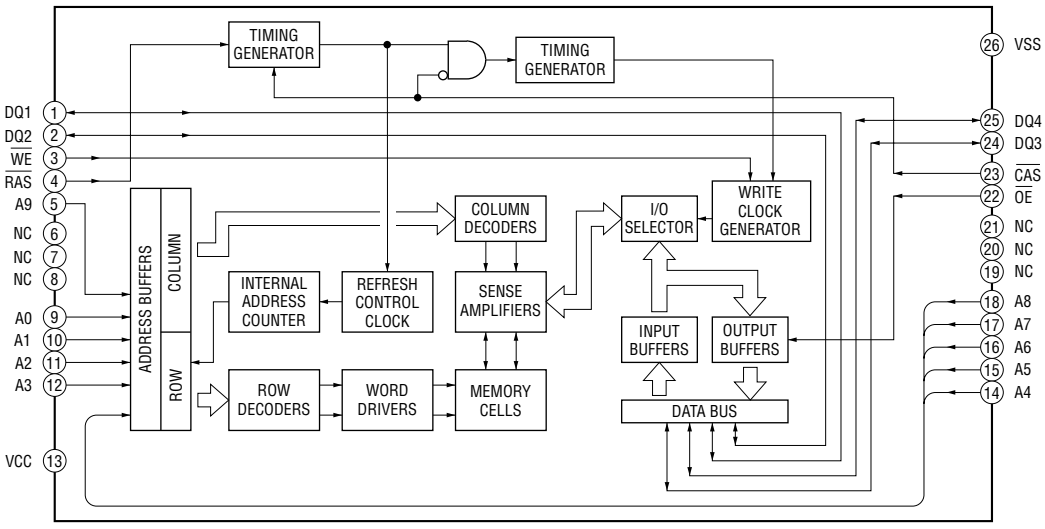
IC303 BH6511FS-E2



IC305 BA6287F-T1

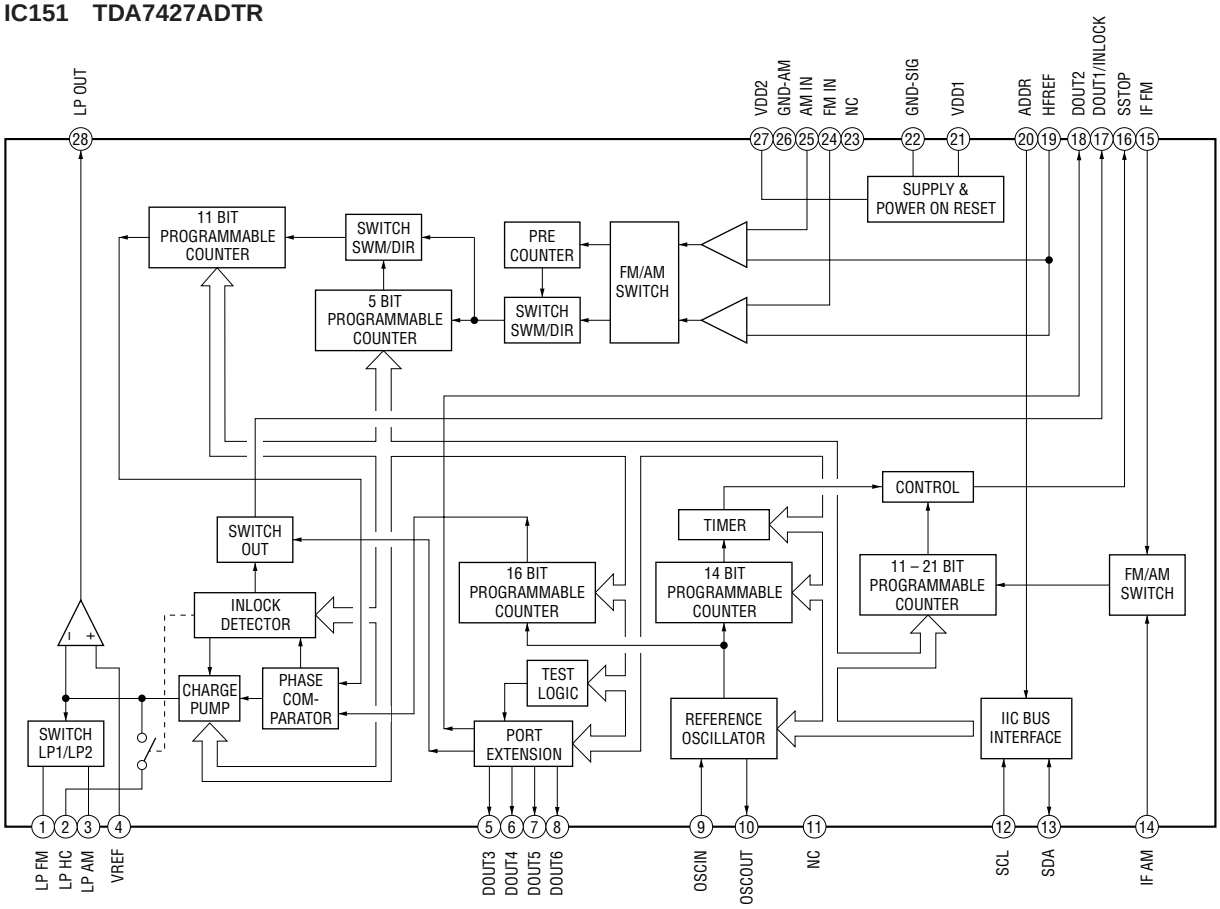


IC307 MN41V4400TT-08S

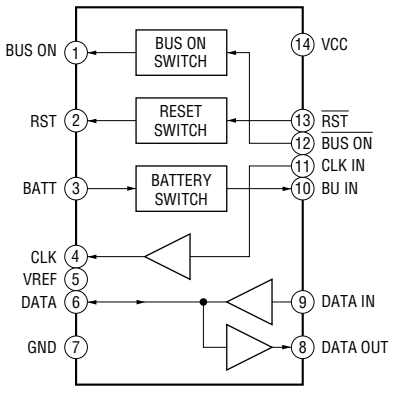


– MAIN Board –

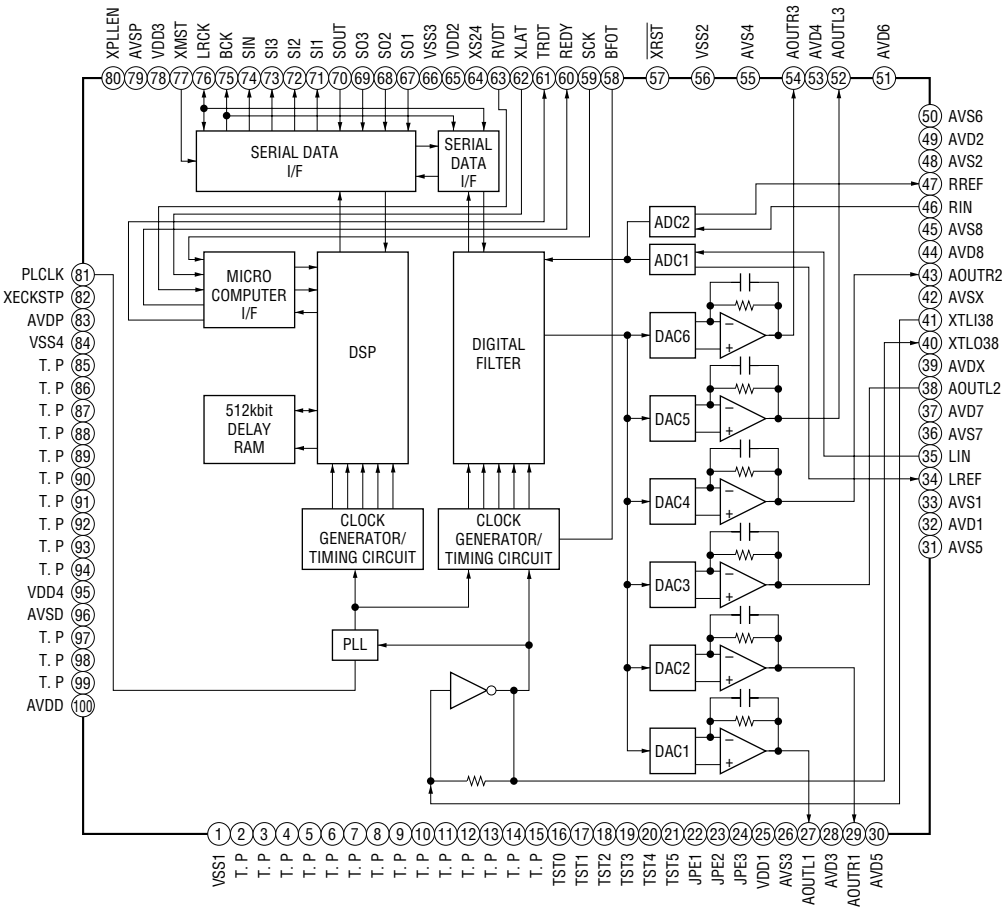
IC151 TDA7427ADTR



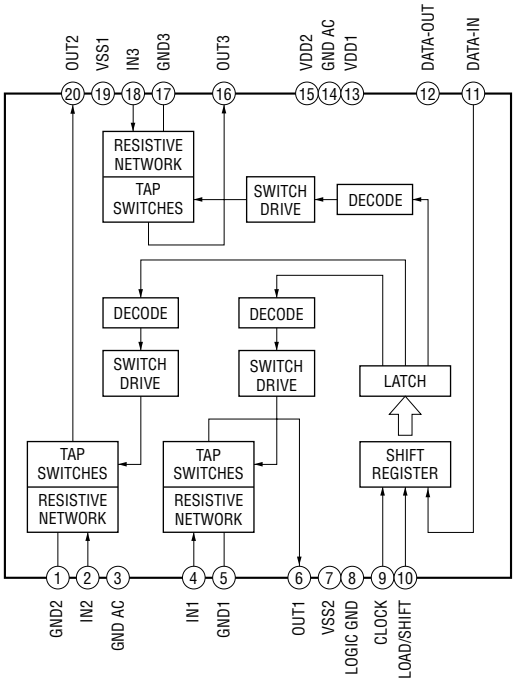
IC271 BA8270FV-E2



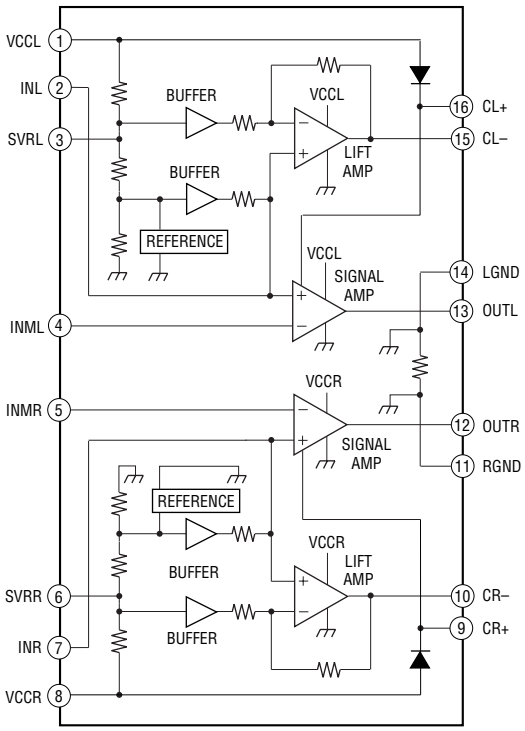
IC300 CXD2727Q


XPLLEN AVSP VDD3 XMST LRCK BCK SIN SI3 SI2 SI1 SOUT SO3 SO2 SO1 VSS3 VDD2 XS24 RVDT XLAT TRDT REDY SCK BFOT XRST VSS2 AVS4 AOUTR3 AVD4 AOUTL3 AVD6
80 79 78 77 76 75 74 73 72 71 70 69 68 67 66 65 64 63 62 61 60 59 58 57 56 55 54 53 52 51
SERIAL DATA I/F
SERIAL DATA I/F
MICRO COMPUTER I/F
DSP
DIGITAL FILTER
512kbit DELAY RAM
CLOCK GENERATOR/ TIMING CIRCUIT
CLOCK GENERATOR/ TIMING CIRCUIT
PLL
ADC2
ADC1
DAC6
DAC5
DAC4
DAC3
DAC2
DAC1
PLCLK 81
XECKSTP 82
AVDP 83
VSS4 84
T. P 85
T. P 86
T. P 87
T. P 88
T. P 89
T. P 90
T. P 91
T. P 92
T. P 93
T. P 94
VDD4 95
AVSD 96
T. P 97
T. P 98
T. P 99
AVDD 100
50 AVS6
49 AVD2
48 AVS2
47 RREF
46 RIN
45 AVS8
44 AVD8
43 AOUTR2
42 AVSX
41 XTLI38
40 XTLO38
39 AVDX
38 AOUTL2
37 AVD7
36 AVS7
35 LIN
34 LREF
33 AVS1
32 AVD1
31 AVS5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
VSS1 T. P T. P T. P T. P T. P T. P T. P T. P T. P T. P T. P T. P T. P T. P TST0 TST1 TST2 TST3 TST4 TST5 JPE1 JPE2 JPE3 VDD1 AVS3 AOUTL1 AVD3 AOUTR1 AVD5

IC602, 632 LM1973MX

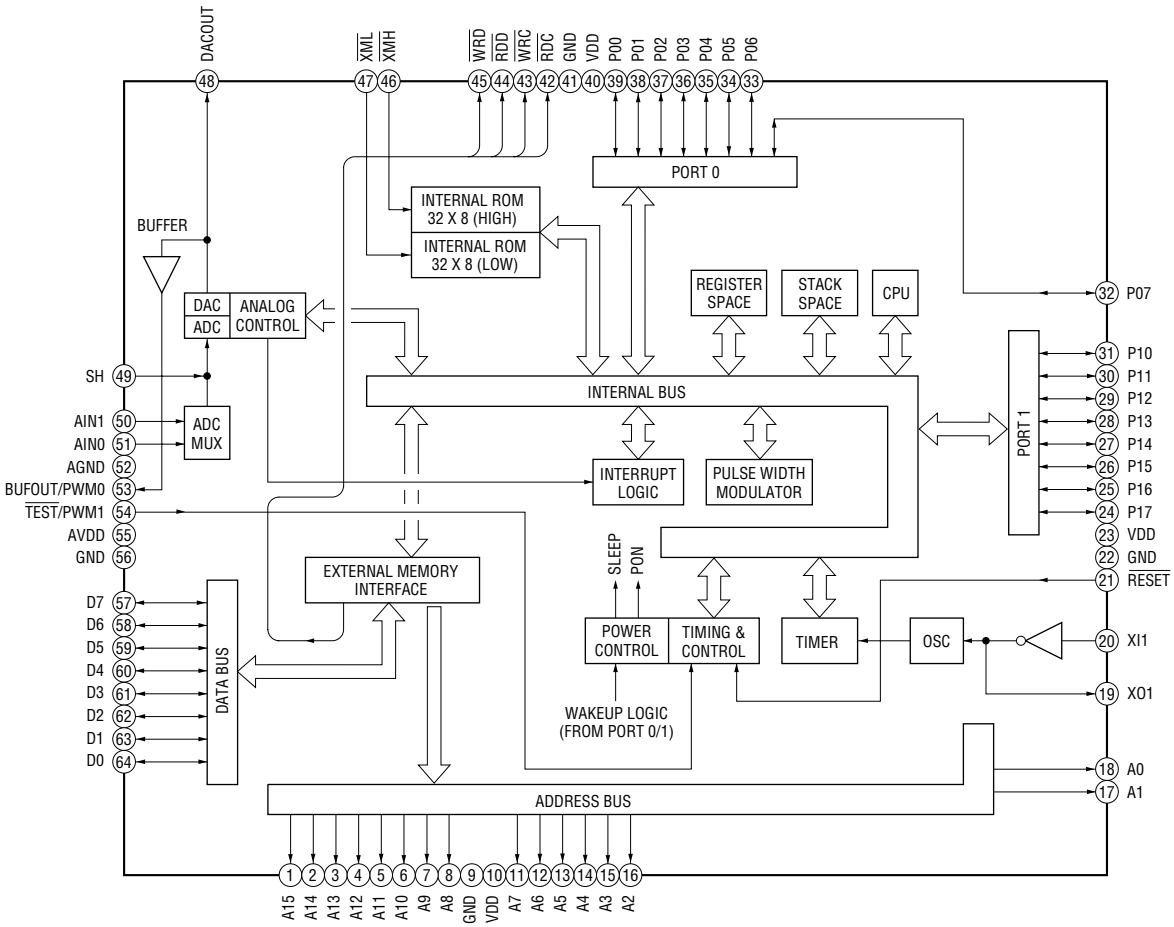


IC604, 634 NJM2160AM-TE2

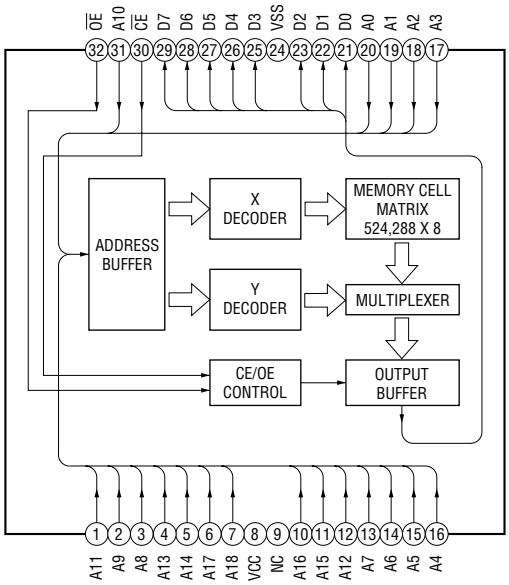


– POWER Board –

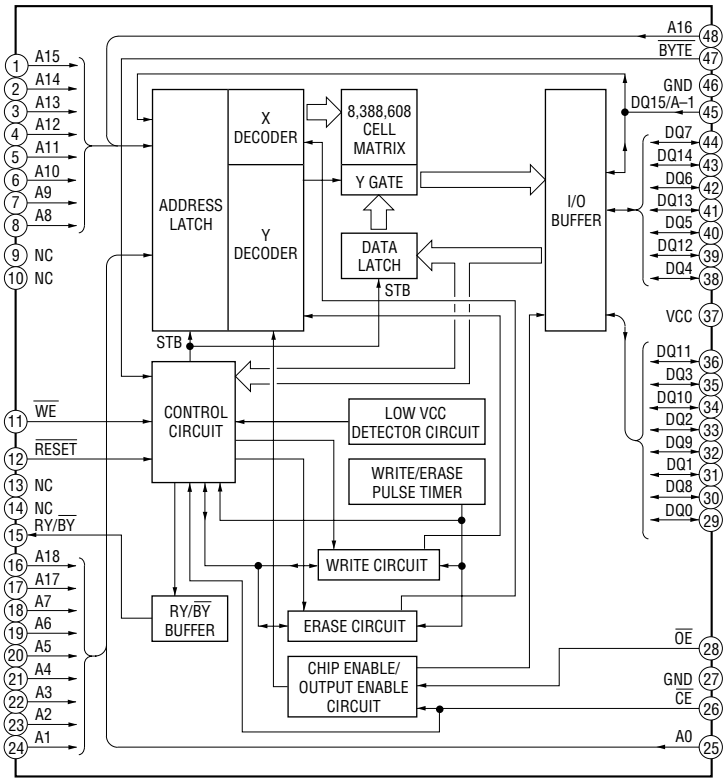
IC801 RSC-164



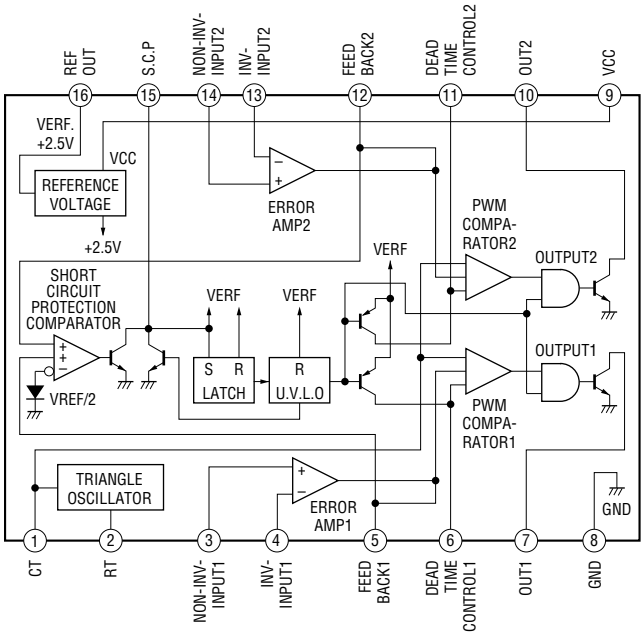
IC803 MSM534001E-49TSKFDR3



IC805 MBM29F800TA



IC871 TL1451ACDB-E20



4-23. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC300 CXD2727Q (DIGITAL SIGNAL PROCESSOR, DIGITAL FILTER, D/A CONVERTER)

Pin No.	Pin Name	I/O	Description
1	VSS1	—	Ground terminal (digital system)
2 to 15	T.P	I	Input terminal for the test (fixed at "L")
16 to 21	TST0 to TST5	I	Input terminal for the test (fixed at "L")
22 to 24	JPE1 to JPE3	I	External condition jump terminal "H": condition jump (fixed at "L")
25	VDD1	—	Power supply terminal (+3.3V) (digital system)
26	AVS3	—	Ground terminal (for D/A converter 1) (analog system)
27	AOUTL1	O	D/A converter 1 (L-ch side) output terminal Analog signal output for front side (L-ch side) output in this set
28	AVD3	—	Power supply terminal (+3.3V) (for D/A converter 1) (analog system)
29	AOUTR1	O	D/A converter 1 (R-ch side) output terminal Analog signal output for rear side (L-ch side) output in this set
30	AVD5	—	Power supply terminal (+3.3V) (for D/A converter 1) (analog system)
31	AVS5	—	Ground terminal (for D/A converter 1) (analog system)
32	AVD1	—	Power supply terminal (+3.3V) (for L-ch side A/D converter) (analog system)
33	AVS1	—	Ground terminal (for L-ch side A/D converter) (analog system)
34	LREF	O	Connected to the bus control for A/D converter (for L-ch side)
35	LIN	I	A/D converter (L-ch side) analog input terminal Tuner and bus audio input signal (L-ch side) in this set
36	AVS7	—	Ground terminal (for D/A converter 2) (analog system)
37	AVD7	—	Power supply terminal (+3.3V) (for D/A converter 2) (analog system)
38	AOUTL2	O	D/A converter 2 (L-ch side) output terminal Not used (open)
39	AVDX	—	Power supply terminal (+3.3V) (for master clock) (analog system)
40	XTLO38	O	System clock output terminal (16.9344 MHz)
41	XTLI38	I	System clock input terminal (16.9344 MHz)
42	AVSX	—	Ground terminal (for master clock) (analog system)
43	AOUTR2	O	D/A converter 2 (R-ch side) output terminal Analog signal output for sub woofer output in this set
44	AVD8	—	Power supply terminal (+3.3V) (for D/A converter 2) (analog system)
45	AVS8	—	Ground terminal (for D/A converter 2) (analog system)
46	RIN	I	A/D converter (R-ch side) analog input terminal Tuner and bus audio input signal (R-ch side) in this set
47	RREF	O	Connected to the bus control for A/D converter (for R-ch side)
48	AVS2	—	Ground terminal (for R-ch side A/D converter) (analog system)
49	AVD2	—	Power supply terminal (+3.3V) (for R-ch side A/D converter) (analog system)
50	AVS6	—	Ground terminal (for D/A converter 3) (analog system)
51	AVD6	—	Power supply terminal (+3.3V) (for D/A converter 3) (analog system)
52	AOUTL3	O	D/A converter 3 (L-ch side) output terminal Analog signal output for rear side (R-ch side) output in this set
53	AVD4	—	Power supply terminal (+3.3V) (for D/A converter 3) (analog system)
54	AOUTR3	O	D/A converter 3 (R-ch side) output terminal Analog signal output for front side (R-ch side) output in this set
55	AVS4	—	Ground terminal (for D/A converter 3) (analog system)
56	VSS2	—	Ground terminal (digital system)
57	$\overline{\text{XRST}}$	I	System reset signal input from the master controller (IC500) "L": reset
58	BFOT	O	Master clock signal output terminal Not used (open)

Pin No.	Pin Name	I/O	Description
59	SCK	I	Serial data transfer clock signal input from the master controller (IC500) and liquid crystal display drive controller (IC701)
60	REDY	O	Transfer enable signal output to the master controller (IC500) "L": transfer prohibition
61	TRDT	O	Serial data output to the master controller (IC500) and liquid crystal display drive controller (IC701)
62	XLAT	I	Serial data latch pulse input from the master controller (IC500)
63	RVDT	I	Serial data input from the master controller (IC500)
64	XS24	I	Serial data 24/32 bit slot selection signal input terminal "L": 24 bit slot, "H": 32 bit slot (validity at slave mode) (fixed at "H" in this set)
65	VDD2	—	Power supply terminal (+3.3V) (digital system)
66	VSS3	—	Ground terminal (digital system)
67 to 69	SO1 to SO3	O	Serial data output terminal Not used (open)
70	SOUT	O	Serial data output terminal Not used (open)
71	SI1	I	Serial data input from the CXD2652AR (IC301)
72, 73	SI2, SI3	I	Serial data input terminal Not used (open)
74	SIN	I	Serial data input terminal Not used (open)
75	BCK	I	Bit clock signal (2.8224 MHz) input from the CXD2652AR (IC301)
76	LRCK	I	L/R sampling clock signal (44.1 kHz) input from the CXD2652AR (IC301)
77	XMST	I	Bit clock (BCK) and L/R sampling clock (LRCK) signal master/slave mode selection signal input from the master controller (IC500) "L": master mode, "H": slave mode
78	VDD3	—	Power supply terminal (+3.3V) (digital system)
79	AVSP	—	Ground terminal (PLL system)
80	XPLLEN	I	PLL enable signal input terminal Normally: fixed at "L"
81	PLCLK	O	PLL clock signal output terminal (22.5792 MHz)
82	XECKSTP	I	PLL clock output control signal input from the master controller (IC500) At "L" is input: fixed at "L" is PLCLK (pin ⑧①) At "H" is input: PLL clock signal output from the PLCLK (pin ⑧①)
83	AVDP	—	Power supply terminal (+3.3V) (PLL system)
84	VSS4	—	Ground terminal (digital system)
85 to 94	T.P	I	Input terminal for the test Normally: fixed at "L"
95	VDD4	—	Power supply terminal (+3.3V) (digital system)
96	AVSD	—	Ground terminal (for D-RAM)
97 to 99	T.P	I	Input terminal for the test Normally: fixed at "L"
100	AVDD	—	Power supply terminal (+3.3V) (for D-RAM)

- **SERVO BOARD IC301 CXD2652AR**
  (DIGITAL SIGNAL PROCESSOR, DIGITAL SERVO PROCESSOR, EFM/ACIRC ENCODER/DECODER, SHOCK PROOF MEMORY CONTROLLER, ATRAC ENCODER/DECODER, 2M BIT D-RAM)

Pin No.	Pin Name	I/O	Description
1	MNT0	O	Focus OK signal output to the MD mechanism controller (IC501) "H" is output when focus is on ("L": NG)
2	MNT1	O	Track jump detection signal output to the MD mechanism controller (IC501)
3	MNT2	O	Busy monitor signal output to the MD mechanism controller (IC501)
4	MNT3	O	Spindle servo lock status monitor signal output to the MD mechanism controller (IC501)
5	SWDT	I	Writing serial data signal input from the MD mechanism controller (IC501)
6	SCLK	I	Serial data transfer clock signal input from the MD mechanism controller (IC501)
7	XLAT	I	Serial data latch pulse signal input from the MD mechanism controller (IC501)
8	SRDT	O (3)	Reading serial data signal output to the MD mechanism controller (IC501)
9	SENS	O (3)	Internal status (SENSE) output to the MD mechanism controller (IC501)
10	$\overline{\text{XRST}}$	I	Reset signal input from the MD mechanism controller (IC501) "L": reset
11	SQSY	O	Subcode Q sync (SCOR) output to the MD mechanism controller (IC501) "L" is output every 13.3 msec Almost all, "H" is output
12	DQSY	O	Digital In U-bit CD format subcode Q sync (SCOR) output terminal "L" is output every 13.3 msec Almost all, "H" is output Not used (open)
13	RECP	I	Laser power selection signal input terminal "L": playback mode, "H": recording mode (fixed at "L" in this set)
14	XINT	O	Interrupt status output to the MD mechanism controller (IC501)
15	TX	I	Recording data output enable signal input terminal Writing data transmission timing input (Also serves as the magnetic head on/off output) Not used (fixed at "L")
16	OSCI	I	System clock signal (512Fs=22.5792 MHz) input from the CXD2727Q (IC300)
17	OSCO	O	System clock signal (512Fs=22.5792 MHz) output terminal Not used (open)
18	XTSL	I	Input terminal for the system clock frequency setting "L": 45.1584 MHz, "H": 22.5792 MHz (fixed at "H" in this set)
19	RVDD	—	Power supply terminal (+3.3V) (digital system)
20	RVSS	—	Ground terminal (digital system)
21	DIN	I	Digital audio signal input terminal when recording mode Not used (fixed at "L")
22	DOUT	O	Digital audio signal output terminal when playback mode Not used (open)
23	ADDT	I	Recording data input terminal Not used (fixed at "L")
24	DADT	O	Playback data output to the CXD2727Q (IC300)
25	LRCK	O	L/R sampling clock signal (44.1 kHz) output to the CXD2727Q (IC300)
26	XBCK	O	Bit clock signal (2.8224 MHz) output to the CXD2727Q (IC300)
27	FS256	O	Clock signal (11.2896 MHz) output terminal Not used (open)
28	DVDD	—	Power supply terminal (+3.3V) (digital system)
29 to 32	A03 to A00	O	Address signal output to the D-RAM (IC307)
33	A10	O	Address signal output to the external D-RAM Not used (open)
34 to 38	A04 to A08	O	Address signal output to the D-RAM (IC307)
39	A11	O	Address signal output to the external D-RAM Not used (open)
40	DVSS	—	Ground terminal (digital system)
41	$\overline{\text{XOE}}$	O	Output enable signal output to the D-RAM (IC307) "L" active
42	$\overline{\text{XCAS}}$	O	Column address strobe signal output to the D-RAM (IC307) "L" active
43	A09	O	Address signal output to the D-RAM (IC307)
44	$\overline{\text{XRAS}}$	O	Row address strobe signal output to the D-RAM (IC307) "L" active
45	$\overline{\text{XWE}}$	O	Write enable signal output to the D-RAM (IC307) "L" active

Pin No.	Pin Name	I/O	Description
46	D1	I/O	Two-way data bus with the D-RAM (IC307)
47	D0	I/O	
48	D2	I/O	
49	D3	I/O	
50	MVCI	I	Digital in PLL oscillation input from the external VCO Not used (fixed at “L”)
51	ASYO	O	Playback EFM full-swing output terminal
52	ASYI	I (A)	Playback EFM asymmetry comparator voltage input terminal
53	AVDD	—	Power supply terminal (+3.3V) (analog system)
54	BIAS	I (A)	Playback EFM asymmetry circuit constant current input terminal
55	RFI	I (A)	Playback EFM RF signal input from the CXA2523AR (IC302)
56	AVSS	—	Ground terminal (analog system)
57	PDO	O (3)	Phase comparison output for clock playback analog PLL of the playback EFM Not used (open)
58	PCO	O (3)	Phase comparison output for master clock of the recording/playback EFM master PLL
59	FILI	I (A)	Filter input for master clock of the recording/playback master PLL
60	FILO	O (A)	Filter output for master clock of the recording/playback master PLL
61	CLTV	I (A)	Internal VCO control voltage input of the recording/playback master PLL
62	PEAK	I (A)	Light amount signal (RF/ABCD) peak hold input from the CXA2523AR (IC302)
63	BOTM	I (A)	Light amount signal (RF/ABCD) bottom hold input from the CXA2523AR (IC302)
64	ABCD	I (A)	Light amount signal (ABCD) input from the CXA2523AR (IC302)
65	FE	I (A)	Focus error signal input from the CXA2523AR (IC302)
66	AUX1	I (A)	Auxiliary signal (I_3 signal/temperature signal) input terminal Not used (fixed at “H”)
67	VC	I (A)	Middle point voltage (+1.65V) input from the CXA2523AR (IC302)
68	ADIO	O (A)	Monitor output of the A/D converter input signal Not used (open)
69	AVDD	—	Power supply terminal (+3.3V) (analog system)
70	ADRT	I (A)	A/D converter operational range upper limit voltage input terminal (fixed at “H” in this set)
71	ADRB	I (A)	A/D converter operational range lower limit voltage input terminal (fixed at “L” in this set)
72	AVSS	—	Ground terminal (analog system)
73	SE	I (A)	Sled error signal input from the CXA2523AR (IC302)
74	TE	I (A)	Tracking error signal input from the CXA2523AR (IC302)
75	AUX2	I (A)	Auxiliary signal input terminal Light amount signal input from the CXA2523AR (IC302)
76	DCHG	I (A)	Connected to the +3.3V power supply
77	APC	I (A)	Error signal input for the laser automatic power control Not used (fixed at “L”)
78	ADFG	I	ADIP duplex FM signal (22.05 kHz ± 1 kHz) input from the CXA2523AR (IC302)
79	F0CNT	O	Filter f0 control signal output terminal Not used (open)
80	XLRF	O	Serial data latch pulse signal output terminal Not used (open)
81	CKRF	O	Serial data transfer clock signal output terminal Not used (open)
82	DTRF	O	Writing serial data output terminal Not used (open)
83	APCREF	O	Control signal output to the reference voltage generator circuit for the laser automatic power control
84	LDDR	O	PWM signal output for the laser automatic power control Not used (open)
85	TRDR	O	Tracking servo drive PWM signal (–) output to the BH6511FS (IC303)
86	TFDR	O	Tracking servo drive PWM signal (+) output to the BH6511FS (IC303)
87	DVDD	—	Power supply terminal (+3.3V) (digital system)
88	FFDR	O	Focus servo drive PWM signal (+) output to the BH6511FS (IC303)
89	FRDR	O	Focus servo drive PWM signal (–) output to the BH6511FS (IC303)
90	FS4	O	Clock signal (176.4 kHz) output terminal (X’tal system) Not used (open)

Pin No.	Pin Name	I/O	Description
91	SRDR	O	Sled servo drive PWM signal (–) output to the BH6511FS (IC303)
92	SFDR	O	Sled servo drive PWM signal (+) output to the BH6511FS (IC303)
93	SPRD	O	Spindle servo drive PWM signal (–) output to the BH6511FS (IC303)
94	SPFD	O	Spindle servo drive PWM signal (+) output to the BH6511FS (IC303)
95	FGIN	I	Not used (fixed at “L”)
96	TEST1	I	Input terminal for the test (fixed at “L”)
97	TEST2	I	
98	TEST3	I	
99	DVSS	—	Ground terminal (digital system)
100	EFMO	O	EFM signal output terminal when recording mode Not used (open)

* I (A) for analog input, O (3) for 3-state output, and O (A) for analog output in the column I/O.

• **SERVO BOARD IC302 CXA2523AR (RF AMP, FOCUS/TRACKING ERROR AMP)**

Pin No.	Pin Name	I/O	Description
1	I	I	I-V converted RF signal I input from the optical pick-up block detector
2	J	I	I-V converted RF signal J input from the optical pick-up block detector
3	VC	O	Middle point voltage (+1.65V) generation output terminal
4 to 9	A to F	I	Signal input from the optical pick-up detector
10	PD	I	Light amount monitor input from the optical pick-up block laser diode
11	APC	O	Laser amplifier output terminal to the automatic power control circuit
12	APCREF	I	Reference voltage input terminal for setting laser power from the CXD2652AR (IC301)
13	GND	—	Ground terminal
14	TEMPI	I	Connected to the temperature sensor Not used (open)
15	TEMPR	O	Output terminal for a temperature sensor reference voltage Not used (open)
16	SWDT	I	Writing serial data input from the MD mechanism controller (IC501)
17	SCLK	I	Serial data transfer clock signal input from the MD mechanism controller (IC501)
18	XLAT	I	Serial data latch pulse signal input from the MD mechanism controller (IC501)
19	$\overline{\text{XSTBY}}$	I	Standby signal input terminal "L": standby (fixed at "H" in this set)
20	F0CNT	I	Center frequency control voltage input terminal of internal circuit (BPF22, BPF3T, EQ) input terminal
21	VREF	O	Reference voltage output terminal Not used (open)
22	EQADJ	I	Center frequency setting terminal for the internal circuit (EQ)
23	3TADJ	I	Center frequency setting terminal for the internal circuit (BPF3T)
24	VCC	—	Power supply terminal (+3.3V)
25	WBLADJ	I	Center frequency setting terminal for the internal circuit (BPF22)
26	TE	O	Tracking error signal output to the CXD2652AR (IC301)
27	CSLED	I	Connected to the external capacitor for low-pass filter of the sled error signal
28	SE	O	Sled error signal output to the CXD2652AR (IC301)
29	ADFM	O	FM signal output of the ADIP
30	ADIN	I	Receives a ADIP FM signal in AC coupling
31	ADAGC	I	Connected to the external capacitor for ADIP AGC
32	ADFG	O	ADIP duplex signal (22.05 kHz ± 1 kHz) output to the CXD2652AR (IC301)
33	AUX	O	Auxiliary signal (I_3 signal/temperature signal) output terminal Not used (open)
34	FE	O	Focus error signal output to the CXD2652AR (IC301)
35	ABCD	O	Light amount signal (ABCD) output to the CXD2652AR (IC301)
36	BOTM	O	Light amount signal (RF/ABCD) bottom hold output to the CXD2652AR (IC301)
37	PEAK	O	Light amount signal (RF/ABCD) peak hold output to the CXD2652AR (IC301)
38	RF	O	Playback EFM RF signal output to the CXD2652AR (IC301)
39	RFAGC	I	Connected to the external capacitor for RF auto gain control circuit
40	AGCI	I	Receives a RF signal in AC coupling
41	COMPO	O	User comparator output terminal Not used (open)
42	COMPP	I	User comparator input terminal Not used (fixed at "L")
43	ADDC	I	Connected to the external capacitor for cutting the low band of the ADIP amplifier
44	OPO	O	User operational amplifier output terminal Not used (open)
45	OPN	I	User operational amplifier inversion input terminal Not used (fixed at "L")
46	RFO	O	RF signal output terminal
47	MORFI	I	Receives a MO RF signal in AC coupling
48	MORFO	O	MO RF signal output terminal

• MAIN BOARD IC500 MB90574APMT-G-214-BND (MASTER CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	RE-IN0	I	Jog dial pulse input of the rotary encoder (EN900) (for VOLUME/BASS/TREBLE/BALANCE/FADER control)
2	RE-IN1	I	
3 to 5	NCO	O	Not used (open)
6	$\overline{\text{SYSRST}}$	O	System reset signal output to the MD mechanism controller (IC501), SONY bus interface (IC271) and liquid crystal display drive controller (IC701) "L": reset
7	$\overline{\text{BUS- ON}}$	O	Bus on/off control signal output to the MD mechanism controller (IC501), SONY bus interface (IC271) and liquid crystal display drive controller (IC701) "L": bus on
8	VCC	—	Power supply terminal (+5V)
9	DSP STP	O	PLL clock output control signal to the CXD2727Q (IC300) At "L" is output: fixed at "L" is PLCLK (pin ⑧① of IC300 CXD2727Q) At "H" is output: PLL clock signal output from the PLCLK (pin ⑧① of IC300 CXD2727Q)
10	NCO	O	Not used (open)
11	CSV PLAY	O	Voice guide and DSP sound selection to the CSV mix switch (IC691) "L": voice guide mode
12	FLS SI	I	Input terminal at the flash memory data write mode
13	FLS SO	O	Output terminal at the flash memory data write mode
14	$\overline{\text{FLASH-W}}$	I	Internal flash memory data write mode detection signal input terminal "L": data write mode Not used (fixed at "H" in this set)
15	BEEP	O	Beep sound drive signal output terminal
16	CSV ON	O	CSV (IC801) power supply control output terminal "H": CSV power on
17	DSP SI	I	Serial data input from the CXD2727Q (IC300)
18	DSP SO	O	Serial data output to the CXD2727Q (IC300)
19	DSP CLK	O	Serial data transfer clock signal output to the CXD2727Q (IC300) and liquid crystal display drive controller (IC701)
20	UNI SI	I	Serial data input from the SONY bus interface (IC271)
21	UNI SO	O	Serial data output to the SONY bus interface (IC271)
22	UNI CKIO	I/O	Serial clock signal output to the MD mechanism controller (IC501), SONY bus interface (IC271) and liquid crystal display drive controller (IC701) or serial clock signal input from the MD mechanism controller (IC501) (for SONY bus)
23	SD-IN	I	Station detector detect input from the FM/AM tuner unit (TU101) Stop level for SEEK, BTM, etc. is determined SD is present at input of "H"
24	SIRCS	I	Sircs remote control signal input from the remote control receiver (IC910)
25	CSV-SI	I	Serial data input from the CSV (IC801)
26	CSV-SO	O	Serial data output to the CSV (IC801)
27	CSV-CKO	O	Serial data transfer clock signal output to the CSV (IC801)
28	$\overline{\text{DSP RST}}$	O	Reset signal output to the CXD2727Q (IC300) "L": reset
29	ST-MONO	I/O	FM stereo broadcasting detection signal input from the FM/AM tuner unit (TU101), or forced monaural control signal output to the FM/AM tuner unit (TU101) "L" is input in the FM stereo mode, or "L" is output in the forced monaural mode
30	DSP XMST	O	Bit clock (BCK) and L/R sampling clock (LRCK) signal master/slave mode selection signal output to the CXD2727Q (IC300) "L": master mode, "H": slave mode
31	WIDE	O	IF band select signal output terminal "H": wide mode In receiving FM signals, interference noise from adjacent stations is removed by narrowing the IF band automatically in the tuner unit so as to raise the selectivity, but in this case, the distortion may increase and accordingly, the IF band is widened forcibly
32	NARROW	O	IF band select signal output to the FM/AM tuner unit (TU101) "H": narrow mode In receiving FM signals, interference noise from adjacent stations is removed by narrowing the IF band automatically in the tuner unit so as to raise the selectivity

Pin No.	Pin Name	I/O	Description
33	VSS	—	Ground terminal
34	C	—	Connected to coupling capacitor for the power supply
35	$\overline{\text{RAMBU}}$	I	Internal RAM reset detection signal input from the RN5VD33AA-TL (IC507) Input terminal to check that RAM data are not destroyed due to low voltage This checking is made within 100 msec after reset
36	MUTE	O	Audio line muting on/off control signal output terminal "H": muting on
37	AUDIO SEL0	O	Analog signal source selection output to the CXD2727Q (IC300)
38	DVCC	—	Power supply terminal (+5V) (for D/A converter)
39	DVSS	—	Ground terminal (for D/A converter)
40	AUDIO SEL1	O	Analog signal source selection output to the CXD2727Q (IC300)
41	LCDANG	O	View field angle control signal is output when front panel is fully opened "H": front panel is fully opened
42	AVCC	—	Power supply terminal (+5V) (for A/D converter)
43	AVRH	I	Reference voltage (+5V) input terminal (for A/D converter)
44	AVRL	I	Reference voltage (0V) input terminal (for A/D converter)
45	AVSS	—	Ground terminal (for A/D converter)
46	VSM (S-METER)	I	FM and AM signal meter voltage detection input from the FM/AM tuner unit (TU101) (A/D input)
47	KEY-IN0	I	Key input terminal (A/D input) (LSW900, S900, LSW901 to LSW904, LSW906) OFF, SEEK/AMS ▶▶I ▶▶ + I◀◀ ◀◀ – , SOURCE, SHIFT, MODE, SOUND, DSPL keys input
48	KEY-IN1	I	Key input terminal (A/D input) (LSW902, LSW905, LSW909 to LSW918) ⏏, LIST, 10 to 3 keys input
49	RC-IN0	I	Rotary remote commander key input terminal (A/D input)
50	DSTSEL0	I	Destination setting terminal (fixed at "L")
51	DSTSEL1	I	Destination setting terminal (fixed at "H")
52, 53	NCO	O	Not used (open)
54	VCC	—	Power supply terminal (+5V)
55	$\overline{\text{VOL LOAD}}$	O	Serial data latch pulse output to the electrical volume (IC602, IC632)
56	VOL DATA L	O	Setting data output (L-ch) to the electrical volume (IC602)
57	VOL DATA R	O	Setting data output (R-ch) to the electrical volume (IC632)
58	VOL CLK	O	Serial clock signal output to the electrical volume (IC602, IC632)
59	$\overline{\text{DSP XLAT}}$	O	Serial data latch pulse signal output to the CXD2727Q (IC300)
60	RC-IN1	I	Rotary remote commander shift key input terminal "L": shift
61	$\overline{\text{ACC IN}}$	I	Accessory detect signal input terminal "L": accessory on
62	POW-ON	O	Main system power supply on/off control signal output "H": power on
63	VSS	—	Ground terminal
64	$\overline{\text{BOOT}}$	O	Serial data output to the liquid crystal display drive controller (IC701) "L" is output when writing change
65	PWM IN	I	Power supply control signal input from the power control (IC871)
66, 67	NCO	O	Not used (open)
68	CD/MD	I	Setting for the internal mechanism CD or MD "L": CD, "H": MD (fixed at "H" in this set)
69	CD/MD ON	I	CD/MD servo power supply input detect terminal
70	I2C-SDA	I/O	Two-way data bus with the FM/AM PLL (IC151)
71	I2C-SCL	O	Serial clock signal output to the FM/AM PLL (IC151)
72	SHIFT OUT	O	Shift clock control signal output of the power control (IC871)
73	X1A	O	Sub system clock output terminal (32.768 kHz)

Pin No.	Pin Name	I/O	Description
74	X0A	I	Sub system clock input terminal (32.768 kHz)
75	NCO	O	Not used (open)
76	KEYACK	I	Input of acknowledge signal for the key entry Acknowledge signal is input to accept function and eject keys in the power off status On at input of "H"
77	BU-IN	I	Battery detect signal input from the SONY bus interface (IC271) and battery detect circuit "L" is input at low voltage
78	SP LATCH	O	Serial data latch pulse output for spectrum analyzer section to the liquid display drive controller (IC701)
79	DSP REDY	I	Transfer enable signal output from the liquid crystal display drive controller (IC701) "L": transfer prohibition, "H": transfer permission
80	$\overline{\text{TEST}}$	I	Setting terminal for the test mode "L": test mode, Normally: fixed at "H"
81	EMPH	O	Emphasis control signal output to the MD mechanism controller (IC501)
82	$\overline{\text{WAKE UP}}$	O	DC/DC converter power supply on/off control signal output terminal Not used (open)
83	TEL-MUTE	I	Telephone muting signal input terminal At input of "L", the signal is attenuated by –20 dB
84	TU-ON	O	Tuner system power supply on/off control signal output "H": tuner power on
85	$\overline{\text{ILL IN}}$	I	Auto dimmer control illumination line detection signal input terminal "L" is input at dimmer detection
86	$\overline{\text{HSTX}}$	I	Hardware standby input terminal "L": hardware standby mode Reset signal input in this set
87	MD2	I	Setting terminal for the CPU operational mode (fixed at "L" in this set)
88	MD0	I	Setting terminal for the CPU operational mode (fixed at "H" in this set)
89	MD1	I	Setting terminal for the CPU operational mode (fixed at "H" in this set)
90	$\overline{\text{RESET}}$	I	System reset signal input from the reset signal generator (IC506) and reset switch (S703) "L": reset "L" is input for several 100 msec after power on, then it changes to "H"
91	VSS	—	Ground terminal
92	X0	I	Main system clock input terminal (3.68 MHz)
93	X1	O	Main system clock output terminal (3.68 MHz)
94	VCC	—	Power supply terminal (+5V)
95	DOOR-IND	O	LED drive signal output of the illumination LED (LED706) "H": LED on "H" is output to turn on LED when front panel is opened
96	DSP ON	O	Power supply on/off control signal output for the CXD2727Q (IC300) "H": DSP on
97	NCO	O	Not used (open)
98	AMP STBY	O	Standby on/off control signal output to the power amplifier (IC481) "L": standby mode, "H": amp on
99 to 106	NCO	O	Not used (open)
107	$\overline{\text{AD-ON}}$	O	A/D converter power control signal output terminal When the KEYACK (pin ⑯ that controls reference voltage power for key A/D conversion input is active, "L" is output from this terminal to enable the input
108	NCO	O	Not used (open)
109	$\overline{\text{NOSE-SW}}$	I	Front panel block remove/attach detection signal input terminal "L": front panel is attached
110	CSV REQ	I	Serial data transfer request input from the CSV (IC801)
111	CSV CE	O	Chip enable signal output to the CSV (IC801) "H": active
112	CSV RST	O	Reset signal output to the CSV (IC801) and flash memory (IC805) "L": reset
113	NCO	O	Not used (open)
114	FM-ON	O	FM system power supply on/off control signal output "L": AM power on, "H": FM power on
115	$\overline{\text{DOOR-SW}}$	I	Front panel open/close detection signal input "L" is input when the front panel is closed
116	NCO	O	Not used (open)

Pin No.	Pin Name	I/O	Description
117	$\overline{\text{SEEK}}$	O	Seek control signal output to the FM/AM tuner unit (TU101) AM mode: Used for IF count output/SD output request/AGC cut at SEEK or BTM FM mode: Used for SD speed up at SEEK, BTM, or AF “L” is output at tuner off
118	AF MUTE	O	Muting on/off control signal output for the tuner signal (FM and AM) “H”: muting on
119	VSS	—	Ground terminal
120	SSTOP	I	IF counter request signal input from the FM/AM PLL (IC151)

• **SERVO BOARD IC501 CXP84340-216Q (MD MECHANISM CONTROLLER)**

Pin No.	Pin Name	I/O	Description
1 to 5	TIN3 to TIN7	I/O	Input of the 4×8 matrix test keys (“L” is always output, except in test mode) Not used (open)
6	LOAD	O	Loading motor control signal output to the loading motor drive (IC305) “H” active *1
7	EJECT	O	Loading motor control signal output to the loading motor drive (IC305) “H” active *1
8, 9	NCO	O	Not used (open)
10	MDMON	O	Power supply on/off control signal output of the MD mechanism deck section main power supply and loading motor drive (IC305) power supply “H”: power on
11	$\overline{\text{E-SW}}$	I	Inputs the disc loading completion detect switch detection signal “L”: When completed of the disc loading operation
12	AG-OK	O	Output of aging status in test mode “L”: under aging, “H”: aging completed Not used (open)
13	ADJ-OK	O	Output of status when aging completed in test mode “L”: aging NG, “H”: aging OK Not used (open)
14 to 17	NCO	O	Not used (open)
18	DFCTSEL	I	Select whether defect function is used for the CXD2652AR (IC301) “L”: used this function , “H”: not used this function (fixed at “H” in this set)
19	DPLLSEL	I	Select whether digital PLL function is used for the CXD2652AR (IC301) “L”: used this function , “H”: not used this function (fixed at “H” in this set)
20	EMPHSEL	I	Select whether emphasis signal output from pin or unilink data “L”: outputs from both pin and unilink data, “H”: output from pin only (fixed at “H” in this set)
21	LOCK	O	Mini-disc lock detection signal output to the liquid crystal display driver (IC701) “H”: lock CLV lock status input in test mode
22	NCO	O	Not used (open)
23	2M/$\overline{\text{4M}}$	I	Select whether D-RAM capacitance 2M bit or 4M bit “L”: 4M bit (external D-RAM) , “H”: 2M bit (internal D-RAM of CXD2652AR) (fixed at “L” in this set)
24, 25	NCO	O	Not used (open)
26	MNT0	I	Focus OK signal input from the CXD2652AR (IC301) “H” is input when focus is on (“L”: NG)
27	MNT1	I	Track jump detection signal input from the CXD2652AR (IC301)
28	MNT2	I	Busy monitor signal input from the CXD2652AR (IC301)
29	MNT3	I	Spindle servo lock status monitor signal input from the CXD2652AR (IC301)
30	$\overline{\text{RESET}}$	I	System reset signal input from the master controller (IC500), reset signal generator (IC506) and reset switch (S703) “L”: reset For several hundreds msec. after the power supply rises, “L” is input, then it changes to “H”
31	EXTAL	O	Main system clock output terminal (10 MHz)
32	XTAL	I	Main system clock input terminal (10 MHz)
33	VSS	—	Ground terminal
34	TX	O	Sub system clock output terminal (32.768 kHz) Not used (open)
35	TEX	I	Sub system clock input terminal (32.768 kHz) Not used (fixed at “L”)
36	AVSS	—	Ground terminal (for A/D converter)
37	AVREF	I	Reference voltage input terminal (+5V) (for A/D converter)
38	INIT	I	Initial reset signal input terminal (A/D input) (fixed at “H”)
39	TEMP	I	Temperature sensor (TH501) input terminal (A/D input)
40	ACNT	I	Select the number of load/eject aging times (A/D input) 0H – 54H (30 times), 55H – OA9H (20 times), OAAH – OFFH (10 times) (fixed at “L”)
41	DO-SEL	I	Select the digital output bits (A/D input)
42	EE-CS	O	Chip select signal output to the external EEPROM device Not used (open)
43	EE-CKO	O	Serial data transfer clock signal output to the external EEPROM device Not used (open)
44	EE-SIO	I/O	Two way data bus with the external EEPROM device Not used (open)
45	MD-SO	O	Writing serial data signal output to the CXD2652AR (IC301) and CXA2523AR (IC302)

Pin No.	Pin Name	I/O	Description
46	LINKOFF	O	Unilink on/off control signal output for the SONY bus "L": link on, "H": link off
47	UNIREQ	O	Data request signal output terminal (for SONY bus) "H": request on Not used (open)
48	UNICKIO	I/O	Serial clock signal input from the master controller (IC500) or serial clock signal output to the SONY bus interface (IC271) and master controller (IC500) (for SONY bus)
49	UNISI	I	Serial data input from the SONY bus interface (IC271)
50	UNISO	O	Serial data output to the SONY bus interface (IC271)
51	MD-CKO	O	Serial data transfer clock signal output to the CXD2652AR (IC301) and CXA2523AR (IC302)
52	MD-SI	I	Reading serial data signal input from the CXD2652AR (IC301)
53	NCO	O	Not used (open)
54	SENS	I	Internal status (SENSE) input from the CXD2652AR (IC301)
55	CC-XINT	I	Interrupt status input from the CXD2652AR (IC301)
56	$\overline{\text{LIMIT-IN}}$	I	Detection input from the sled limit-in detect switch The optical pick-up is inner position when "L"
57	EJT-KEY	I	Eject request signal input terminal "L": eject on Not used (fixed at "H")
58	ERROR-PWM	O	PWM error monitor output terminal (C1and ATER is output when test mode) Not used (open)
59	$\overline{\text{MD-RST}}$	O	Reset signal output to the CXD2652AR (IC301) and BH6511FS (IC303) "L": reset
60	BU-IN	I	Battery detect signal input from the SONY bus interface (IC271) and battery check circuit "H": battery on
61	$\overline{\text{BUS-ON}}$	I	SONY bus on/off control signal input from the master controller (IC500) "L": bus on
62	SQSY	I	Subcode Q sync (SCOR) input from the CXD2652AR (IC301) "L" is input every 13.3 msec Almost all, "H" is input
63	$\overline{\text{C-SW}}$	I	Inputs the disc loading start or disc eject completion detect switch detection signal "L": When start or eject completed of the disc loading operation
64	MD-LAT	O	Serial data latch pulse signal output to the CXD2652AR (IC301) and CXA2523AR (IC302)
65	MD-ON	O	Power supply on/off control signal output of the MD mechanism deck section main power supply "H": power on
66	DEEMP	O	Emphasis on/off control signal output to the master controller (IC500) "H": emphasis on
67	A-MUTE	O	Audio muting on/off control signal output terminal
68	NCO	O	Not used (open)
69	TSTCKO	O	Output of clock signal for the test mode display Not used (open)
70	TSTSO	O	Output of data for the test mode display Not used (open)
71	$\overline{\text{TSTMOD}}$	I	Setting terminal for the test mode "L": test mode, "H": normal mode
72	VCC	—	Power supply terminal (+5V)
73	NIL	I	Not used (fixed at "H")
74 to 77	TOUT0 to TOUT3	O	Output of the 4×8 matrix test keys Not used (open)
78 to 80	TIN0 to TIN2	I/O	Input of the 4×8 matrix test keys ("L" is always output, except in test mode) Not used (open)

*1 Loading motor (M903) control

Operation / Terminal	IN	OUT	BRAKE	STOP
LOAD (pin ⑥)	"H"	"L"	"H"	"L"
EJECT (pin ⑦)	"L"	"H"	"H"	"L"

• MAIN BOARD IC701 HD6432355A08F (LIQUID CRYSTAL DISPLAY DRIVE CONTROLLER)

Pin No.	Pin Name	I/O	Description
1, 2	PG3, PG4	O	Not used (open)
3	VSS	—	Ground terminal
4	NC	—	Not used (open)
5	VCC	—	Power supply terminal (+5V)
6 to 9	PC0 to PC3	O	Not used (open)
10	VSS	—	Ground terminal
11 to 14	PC4 to PC7	O	Not used (open)
15 to 18	PB0 to PB3	O	Not used (open)
19	VSS	—	Ground terminal
20 to 23	PB4 to PB7	O	Not used (open)
24 to 27	PA0 to PA3	O	Not used (open)
28	VSS	—	Ground terminal
29 to 32	PA4/IRQ4 to PA7/IRQ7	O	Not used (open)
33	SP-LAT	I	Serial data latch pulse input for spectrum display from the master controller (IC500) "H" active
34	P66/IRQ2	O	Not used (open)
35, 36	VSS	—	Ground terminal
37	P65/IRQ1	O	Not used (open)
38	$\overline{\text{BUS-ON}}$	I	Bus on/off control signal output from the master controller (IC500) "L": bus on
39	VCC	—	Power supply terminal (+5V)
40	$\overline{\text{CD}}$/MD	I	Setting terminal for the internal mechanism CD or MD "L": CD, "H": MD (fixed at "H" in this set)
41 to 43	PE1 to PE3	O	Not used (open)
44	VSS	—	Ground terminal
45	TIR IND	O	LED drive signal output of the TIR indicator "H": LED on Not used (open)
46, 47	PE5, PE6	O	Not used (open)
48	MD LOCK	I	Mini-disc lock detection signal input from the MD mechanism controller (IC501) "H": lock CLV lock status output in test mode
49	BU-IN	I	Battery detect signal input from the SONY bus interface (IC271) and battery detect circuit "L" is input at low voltage
50	LINK-OFF	O	Link on/off control signal output for the SONY bus "L": link on, "H": link off Not used (open)
51	PD2	O	Not used (open)
52	ILL-ON	O	Power on/off control signal output of the illumination LED "H": power on
53	VSS	—	Ground terminal
54	$\overline{\text{DOOR-SW}}$	I	Front panel open/close detection signal input "L" is input when the front panel is closed
55	NCO	O	Not used (open)
56	PD6	O	Not used (open)
57	$\overline{\text{BOOT}}$	I	Serial data input at the flash memory writing mode "L" is input when writing change
58	VCC	—	Power supply terminal (+5V)
59	NCO	O	Not used (open)
60	TX/FL-SO/ LCDDATA	O	Display serial data output to the liquid crystal display driver (IC900, 920) Output terminal for UART transfer data when writing into internal flash memory data
61	SP-SI	I	Spectrum analyzer display serial data input from the CXD2727Q (IC300)
62	RX	I	Input terminal for UART transfer data when writing into internal flash memory data

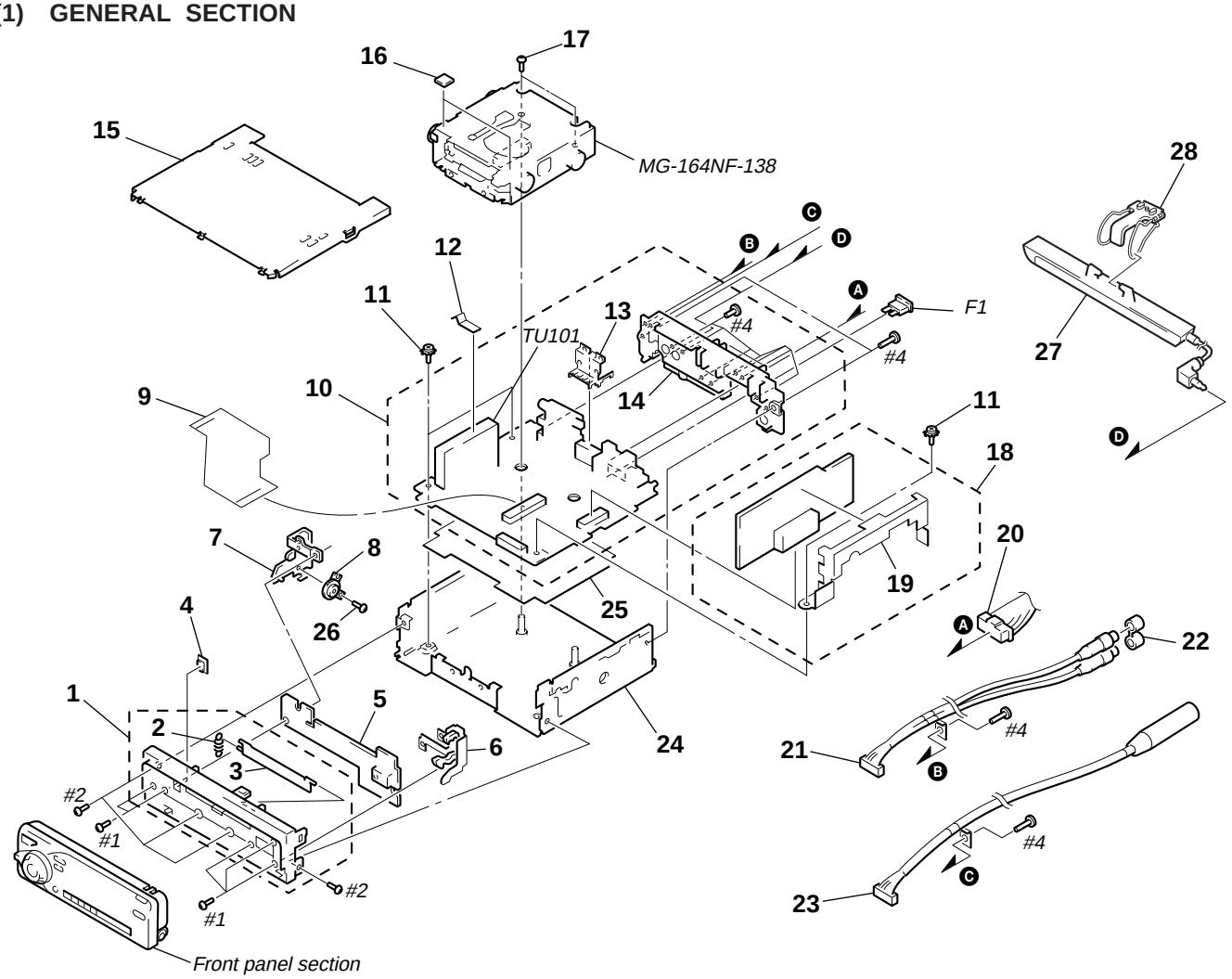
Pin No.	Pin Name	I/O	Description
63	SP-SCK	I	Spectrum analyzer display serial data transfer clock signal input from the master controller (IC500)
64	LCDCLK	O	Display serial data transfer clock signal output to the liquid crystal display driver (IC900, 920)
65	VSS	—	Ground terminal
66	$\overline{\text{LCDINH}}$	O	Blank indicate control signal output to the liquid crystal display driver (IC900, 920) "L": no display
67, 68	VSS	—	Ground terminal
69	LCDCE0	O	Chip enable signal output to the liquid crystal display driver (IC900) "H" active
70	$\overline{\text{LCDCE1}}$	O	Chip enable signal output to the liquid crystal display driver (IC920) "L" active
71	P63	O	Not used (open)
72 to 78	P27 to P21	O	Not used (open)
79	FL W	O	Flash memory data write control signal output terminal "H": active
80	FWE (L)	I	Flash memory data write enable signal input terminal
81	$\overline{\text{RESET}}$	I	System reset signal input from the reset signal generator (IC506) and reset switch (S703) "L" is input for several 100 msec after power on, then it changes to "H"
82	NMI (H)	I	Non maskable interrupt input terminal Connect the backup detect circuit (BU-IN pin ㊾) in this set
83	$\overline{\text{STBY (H)}}$	I	Hard ware standby input terminal Not used (fixed at "H")
84	VCC	—	Power supply terminal (+5V)
85	XTAL	O	System clock output terminal (18.432 MHz)
86	EXTAL	I	System clock input terminal (18.432 MHz)
87	VSS	—	Ground terminal
88	PF7	O	Not used (open)
89	VCC	—	Power supply terminal (+5V)
90 to 96	PF6 to PF0	O	Not used (open)
97	UNI-SO	O	Serial data output to the SONY bus interface (IC271)
98	UNI-SO	I	Serial data input from the SONY bus interface (IC271)
99, 100	VSS	—	Ground terminal
101	UNI-SCK	I/O	Serial clock signal input /output with the MD mechanism controller (IC501) and master controller (IC500) or serial clock signal output to the SONY bus interface (IC271)
102	P53/ADTRG	O	Not used (open)
103	AVCC	—	Power supply terminal (+5V) (for A/D converter)
104	VREF	I	Reference voltage (+5V) input terminal (for A/D converter)
105 to 110	P40/AN0 to P45/AN5	I	Not used (fixed at "L")
111	P46/AN6/DA0	I	Not used (fixed at "L")
112	P47/AN7/DA1	I	Not used (fixed at "L")
113	AVSS	—	Ground terminal (for A/D converter)
114	VSS	—	Ground terminal
115 to 122	P17 to P10	O	Not used (open)
123	MD0 (H)	I	Setting terminal for the CPU operational mode (fixed at "H" in this set)
124	MD1 (H)	I	Setting terminal for the CPU operational mode (fixed at "H" in this set)
125	MD2 (H)	I	Setting terminal for the CPU operational mode (fixed at "H" in this set)
126 to 128	PG0 to PG2	O	Not used (open)

SECTION 5
EXPLODED VIEWS

NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

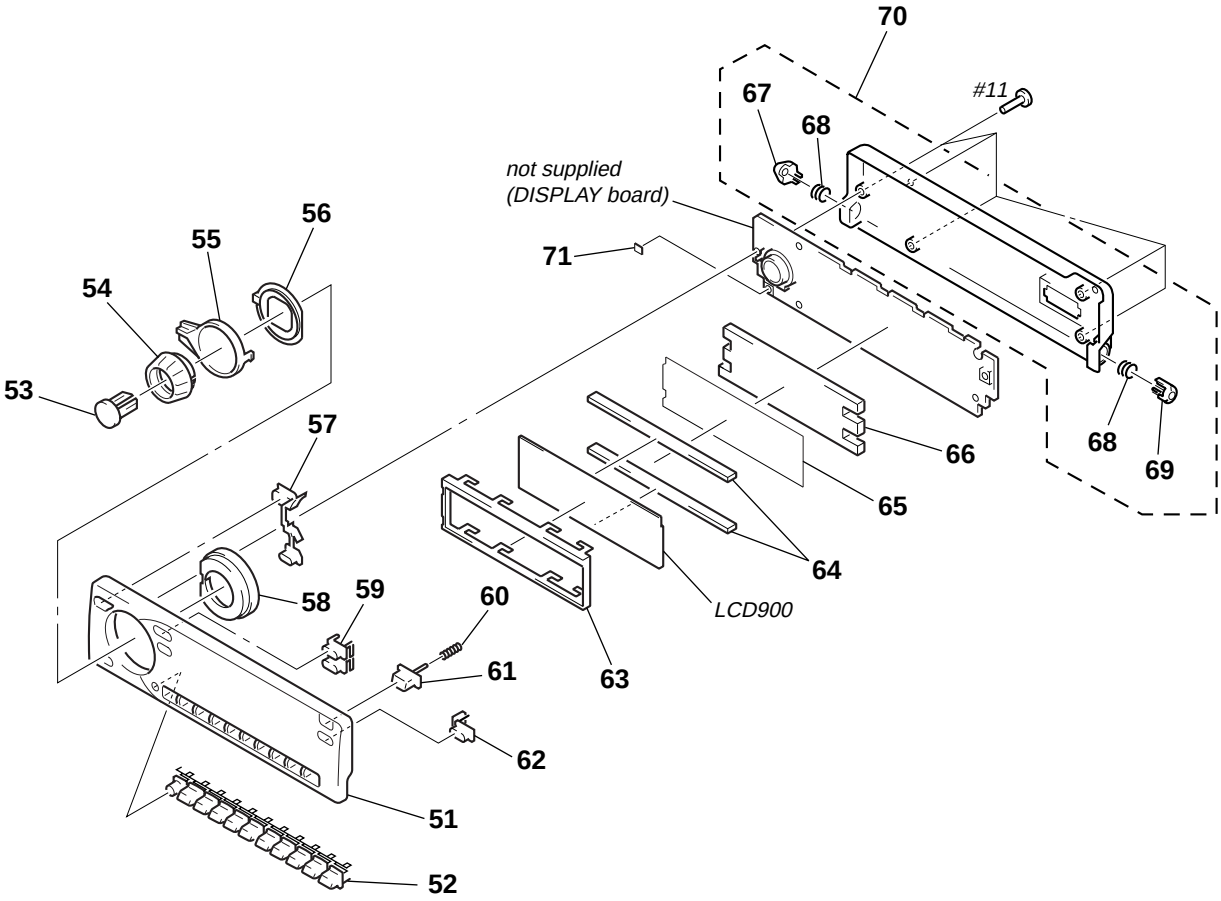
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

(1) GENERAL SECTION



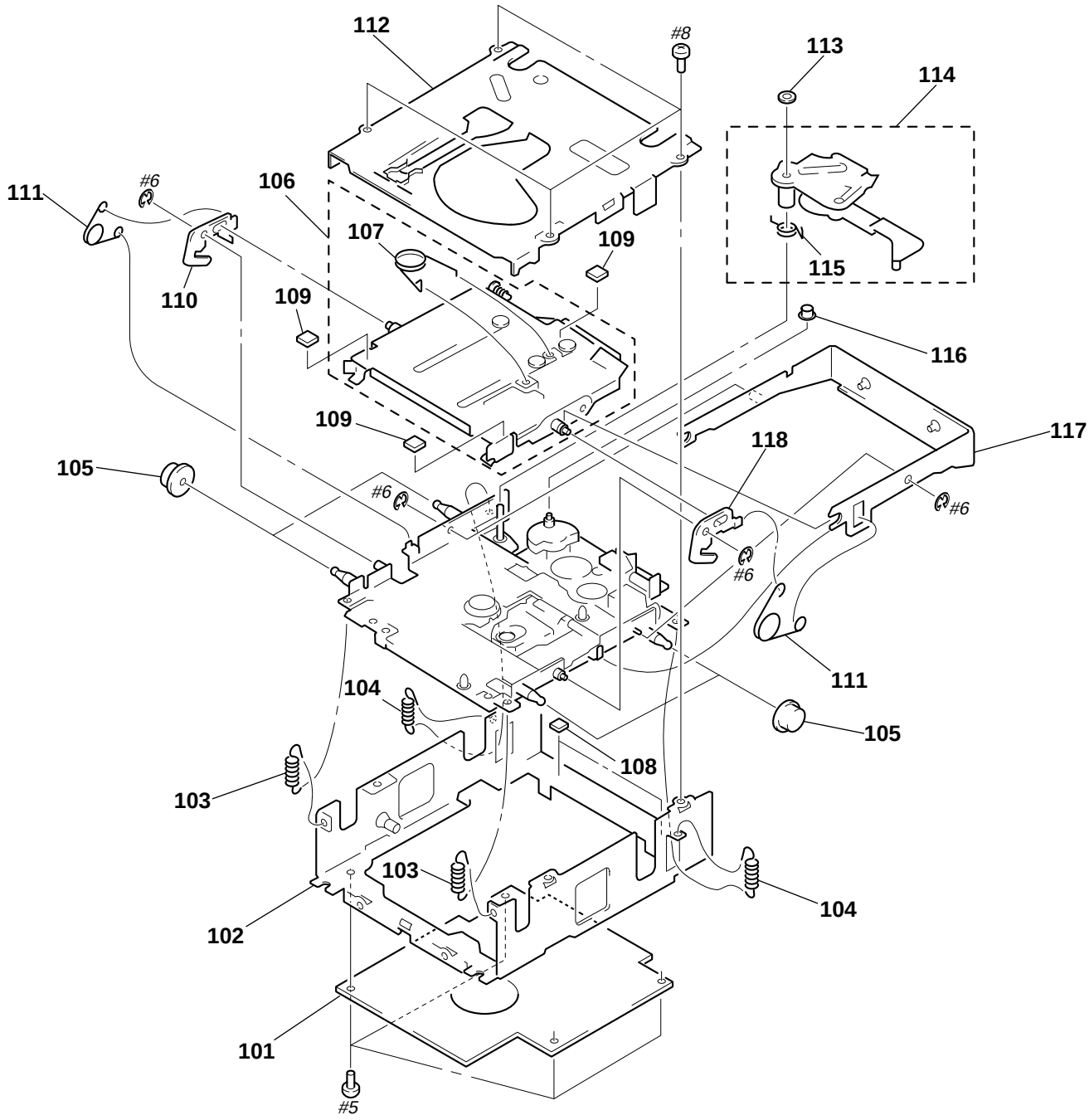
Ref. No.	Part No.	Description	Remark
1	X-3377-561-1	PANELASSY, SUB	
2	3-025-484-01	SPRING (DOOR)	
3	3-025-483-01	DOOR (MD)	
4	3-022-338-01	BUTTON (EJECT) (⏏)	
* 5	A-3294-730-A	RELAY BOARD, COMPLETE	
6	X-3376-687-1	LOCK ASSY	
* 7	X-3376-689-1	BRACKET (GEAR) ASSY	
8	3-030-909-02	DAMPER, OIL	
9	1-674-594-11	FLEXIBLE BOARD	
* 10	A-3294-726-A	MAIN BOARD, COMPLETE	
11	3-376-464-11	SCREW (+PTT 2.6X6), GROUND POINT	
12	3-360-123-01	PLATE (C), GROUND	
* 13	3-022-317-01	BRACKET (AMP)	
* 14	3-023-841-11	HEAT SINK	
* 15	3-022-316-11	COVER	
16	3-011-999-01	CUSHION (MD)	
17	3-932-860-01	SCREW (2.6X4) (C TIGHT), +PTT	
* 18	A-3294-728-A	POWER BOARD, COMPLETE	
* 19	3-036-995-01	BRACKET (POWER)	
20	1-791-457-11	CORD (WITH CONNECTOR) (POWER)	
21	1-790-355-21	CORD (WITH CONNECTOR) (RCA)	
22	3-339-410-01	COVER (2), PIN JACK	
23	1-777-246-21	CORD (WITH CONNECTOR) (ANT)	
* 24	X-3377-555-1	CHASSIS ASSY	
* 25	3-036-998-01	SHEET, INSULATING	
26	3-713-786-51	SCREW +P 2X3	
27	1-475-982-11	UNIT (MICROPHONE)	
28	X-3375-861-2	HOLDER (MIC) ASSY	
F1	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A)	
TU101	A-3282-045-A	TUNER UNIT (TUX-012 (E))	

(2) FRONT PANEL SECTION



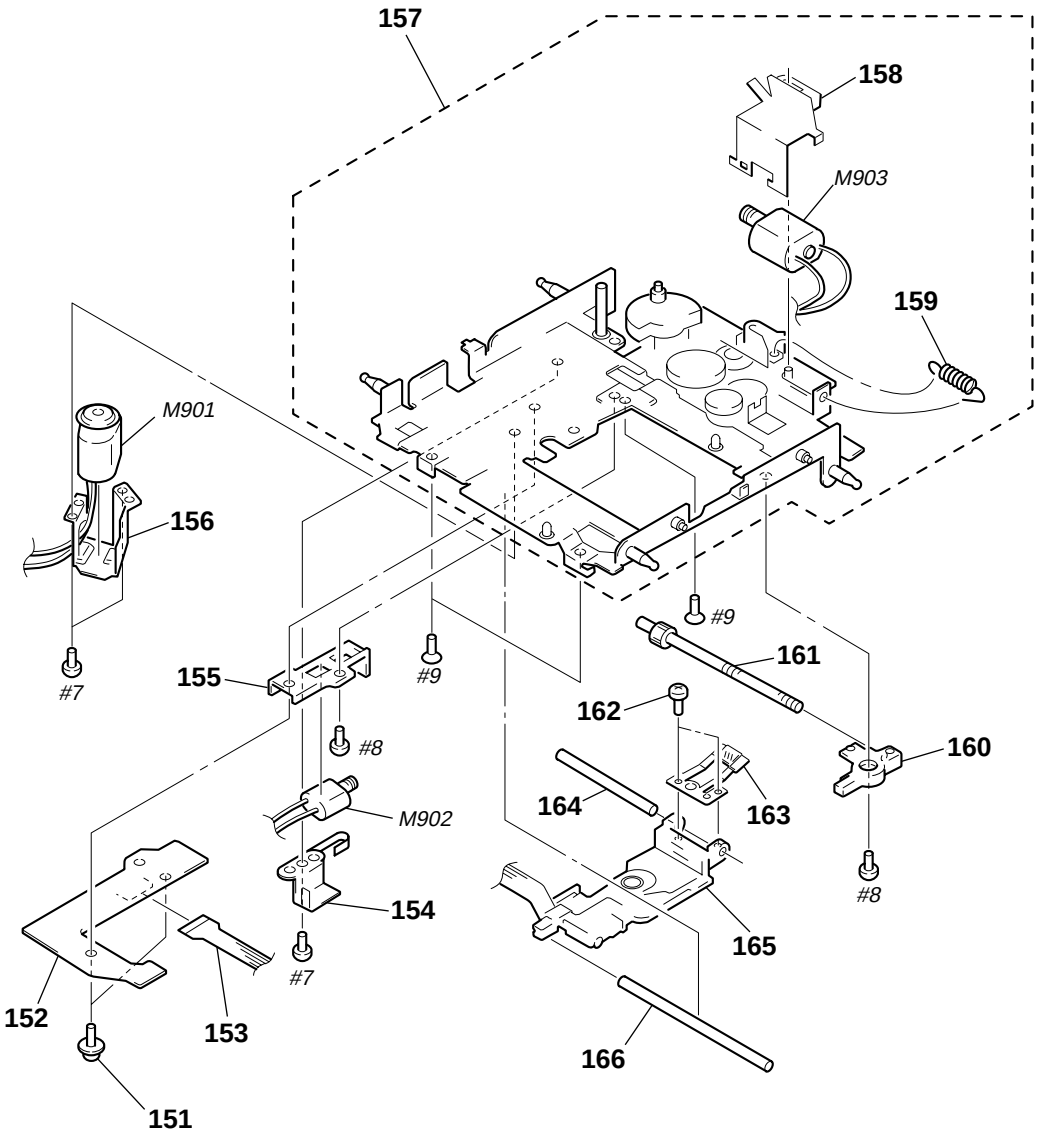
Ref. No.	Part No.	Description	Remark
51	X-3377-554-1	PANEL SUB ASSY, FRONT	
52	3-022-332-01	BUTTON (10 KEY) (SHIFT. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10)	
53	3-022-329-21	BUTTON (SOURCE)	
54	3-033-667-02	KNOB (VOL)	
55	3-022-323-31	LEVER (SHUTTLE) (+ ▶▶I ▶▶. ◀◀ I◀◀ –. SEEK/AMS)	
56	3-022-324-02	PLATE (SHUTTLE), LIGHT GUIDE	
57	3-022-330-11	BUTTON (MODE) (MODE. OFF)	
* 58	3-030-648-01	PLATE (RING), LIGHT GUIDE	
59	3-022-331-01	BUTTON (SOUND) (SOUND. DSPL)	
60	3-935-151-01	SPRING (OPEN)	
61	3-022-333-01	BUTTON (OPEN)	
62	3-022-334-01	BUTTON (LIST)	
* 63	3-037-152-01	BRACKET (LCD)	
64	1-694-414-11	CONDUCTOR BOARD, CONNECTION (RUBBER CONNECTOR)	
* 65	3-037-000-01	SHEET, DIFUSION	
* 66	3-037-669-01	PLATE (LCD), LIGHT GUIDE	
67	3-010-999-01	BEARING (L)	
68	3-010-998-01	SPRING (BEARING)	
69	3-011-000-01	BEARING (R)	
70	X-3377-563-1	PANEL ASSY, FRONT BACK	
71	3-327-119-01	SPACER (A)	
LCD900	1-803-633-11	DISPLAY PANEL, LIQUID CRYSTAL	

(3) MECHANISM DECK SECTION-1 (MG-164NF-138)



Ref. No.	Part No.	Description	Remark
* 101	A-3317-836-A	SERVO BOARD, COMPLETE	
* 102	X-3376-799-1	CHASSIS ASSY, MD	
103	3-032-714-01	SPRING (FLOAT F), TENSION	
104	3-921-111-01	SPRING (FLOAT B), TENSION	
105	3-919-273-01	DAMPER, OIL	
* 106	X-3376-796-2	HOLDER ASSY	
107	3-032-682-01	SPRING (HOLDER)	
* 108	3-034-301-01	CUSHION (EJ2)	
* 109	3-034-302-01	CUSHION (EJ3)	
* 110	3-032-712-01	LEVER (LOCK R)	
111	3-919-281-01	SPRING (CHUCKING)	
* 112	X-3376-800-1	COVER ASSY, MD	
113	3-035-932-01	WASHER, STOPPER	
* 114	X-3376-797-3	LEVER (LE) ASSY	
115	3-032-707-01	SPRING (LEVER LE)	
116	3-925-034-01	ROLLER (GEAR E)	
* 117	X-3376-798-1	ARM ASSY, CHUCKING	
* 118	3-032-711-01	LEVER (LOCK L)	

(4) MECHANISM DECK SECTION-2 (MG-164NF-138)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
151	2-626-617-01	SCREW (2X8)	
152	A-3317-834-A	SENSOR BOARD, COMPLETE	
153	1-654-693-11	SENSOR FLEXIBLE BOARD	
154	3-919-283-01	BRACKET (SL)	
* 155	3-032-704-01	BASE (SL)	
156	3-919-297-01	BRACKET (SP)	
157	A-3301-750-A	CHASSIS (OP) ASSY	
158	3-032-660-01	BRACKET (LO)	
159	3-032-669-01	SPRING (RACK), TENSION	
* 160	3-032-705-01	BEARING (SL)	

Ref. No.	Part No.	Description	Remark
161	X-3373-213-1	SCREW ASSY, FEED	
162	3-939-590-07	SCREW (IB LOCK)	
163	3-010-091-01	SPRING (SL FEED)	
164	3-919-293-01	SHAFT (OPT S), GUIDE	
⚠165	8-583-046-05	OPTICAL PICK-UP KMS-241B/J1RP	
166	3-920-537-01	SHAFT (OPT L), GUIDE	
M901	A-3301-407-A	MOTOR ASSY, SP (SPINDLE)	
M902	A-3291-190-A	MOTOR ASSY, SL (SLED)	
M903	A-3291-191-A	MOTOR ASSY, LO (LOADING)	

SECTION 6
ELECTRICAL PARTS LIST

DISPLAY

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark
		DISPLAY BOARD **********	
	1-694-414-11	CONDUCTOR BOARD, CONNENTION (RUBBER CONNECTOR)	
*	3-037-000-01	SHEET, DIFFUSION	
*	3-037-152-01	BRACKET (LCD)	
*	3-037-669-01	PLATE (LCD), LIGHT GUIDE	
		< CAPACITOR >	
C900	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
C901	1-107-823-11	CERAMIC CHIP 0.47uF 10% 16V	
C902	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
C905	1-164-489-11	CERAMIC CHIP 0.22uF 10% 16V	
C920	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C921	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C922	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C958	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C959	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C960	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C961	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C962	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
		< CONNECTOR >	
CN800	1-778-183-11	PLUG, CONNECTOR 18P	
		< DIODE >	
D901	8-719-976-99	DIODE HZU5.1B2TRF	
D902	8-719-064-08	DIODE HZU6.8B2TRF	
D903	8-719-071-62	DIODE HZU3.3B2TRF	
D905	8-719-017-62	DIODE MA8068-L-TX	
D971	8-719-071-59	DIODE HZU2.7B2TRF	
		< IC >	
IC900	8-759-496-75	IC uPD16432BGC-018-9EU	
IC910	8-749-012-25	IC RS-170-TU	
IC920	8-759-580-20	IC uPD16431AGC-7ET	
IC921	8-759-075-66	IC TA75S01F (TE85L)	
		< SHORT >	
JC901	1-216-295-00	SHORT 0	
		< LIQUID CRYSTAL DISPLAY >	
LCD900	1-803-633-11	DISPLAY PANEL, LIQUID CRYSTAL	

Ref. No.	Part No.	Description	Remark
		< LED >	
LED900	8-719-987-45	LED CL-155Y/PG-CD-TL (ILLUMINATION)	
LED901	8-719-987-45	LED CL-155Y/PG-CD-TL (ILLUMINATION)	
LED902	8-719-987-45	LED CL-155Y/PG-CD-TL (ILLUMINATION)	
LED903	8-719-987-45	LED CL-155Y/PG-CD-TL (ILLUMINATION)	
LED904	8-719-987-45	LED CL-155Y/PG-CD-TL (ILLUMINATION)	
LED905	8-719-987-45	LED CL-155Y/PG-CD-TL (ILLUMINATION)	
LED906	8-719-033-13	LED CL-170Y-CD-T (ILLUMINATION)	
LED907	8-719-033-14	LED CL-170PG-CD-T (ILLUMINATION)	
LED971	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
LED972	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
LED973	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
LED974	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
LED975	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
LED976	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
		< SWITCH >	
LSW900	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (OFF)	
LSW901	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (SOURCE)	
LSW902	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (SHIFT)	
LSW903	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (MODE)	
LSW904	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (SOUND)	
LSW905	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (LIST)	
LSW906	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (DSPL, SA)	
LSW909	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (10)	
LSW910	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (9)	
LSW911	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (8)	
LSW912	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (7)	
LSW913	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (6)	
LSW914	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (5)	
LSW915	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (4)	
LSW916	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (3)	
LSW917	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (2)	
LSW918	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (1)	
		< TRANSISTOR >	
Q900	8-729-904-66	TRANSISTOR DTD113EK-T-146	
Q901	8-729-904-66	TRANSISTOR DTD113EK-T-146	
Q902	8-729-424-08	TRANSISTOR UN2111-TX	
Q903	8-729-424-08	TRANSISTOR UN2111-TX	
Q904	8-729-106-60	TRANSISTOR 2SB1132-T101-QR	
Q971	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q972	8-729-106-60	TRANSISTOR 2SB1132-T101-QR	

DISPLAY | MAIN

Ref. No.	Part No.	Description			Remark
		< RESISTOR >			
R901	1-219-286-11	RES, CHIP	680	2%	1/16W
R902	1-219-286-11	RES, CHIP	680	2%	1/16W
R903	1-219-286-11	RES, CHIP	680	2%	1/16W
R904	1-218-847-11	RES, CHIP	1K	2%	1/16W
R905	1-218-851-11	RES, CHIP	1.5K	2%	1/16W
R906	1-218-851-11	RES, CHIP	1.5K	2%	1/16W
R907	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R908	1-218-855-11	RES, CHIP	2.2K	2%	1/16W
R909	1-219-286-11	RES, CHIP	680	2%	1/16W
R910	1-219-286-11	RES, CHIP	680	2%	1/16W
R911	1-218-847-11	RES, CHIP	1K	2%	1/16W
R912	1-218-851-11	RES, CHIP	1.5K	2%	1/16W
R913	1-218-851-11	RES, CHIP	1.5K	2%	1/16W
R914	1-218-855-11	RES, CHIP	2.2K	2%	1/16W
R915	1-218-859-11	RES, CHIP	3.3K	2%	1/16W
R916	1-218-863-11	RES, CHIP	4.7K	2%	1/16W
R917	1-218-867-11	RES, CHIP	6.8K	2%	1/16W
R918	1-218-871-11	RES, CHIP	10K	2%	1/16W
R919	1-218-875-11	RES, CHIP	15K	2%	1/16W
R920	1-218-879-11	RES, CHIP	22K	2%	1/16W
R921	1-216-809-11	METAL CHIP	100	5%	1/16W
R922	1-216-809-11	METAL CHIP	100	5%	1/16W
R923	1-216-809-11	METAL CHIP	100	5%	1/16W
R924	1-216-845-11	METAL CHIP	100K	5%	1/16W
R925	1-216-841-11	METAL CHIP	47K	5%	1/16W
R926	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R927	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R928	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R929	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R931	1-216-033-00	METAL CHIP	220	5%	1/10W
R932	1-216-039-00	METAL CHIP	390	5%	1/10W
R933	1-216-033-00	METAL CHIP	220	5%	1/10W
R934	1-216-821-11	METAL CHIP	1K	5%	1/16W
R935	1-216-033-00	METAL CHIP	220	5%	1/10W
R936	1-216-033-00	METAL CHIP	220	5%	1/10W
R937	1-216-037-00	METAL CHIP	330	5%	1/10W
R938	1-216-037-00	METAL CHIP	330	5%	1/10W
R939	1-216-194-00	METAL CHIP	680	5%	1/8W
R941	1-216-809-11	METAL CHIP	100	5%	1/16W
R942	1-216-041-00	METAL CHIP	470	5%	1/10W
R943	1-216-025-00	RES, CHIP	100	5%	1/10W
R944	1-216-049-11	METAL CHIP	1K	5%	1/10W
R945	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R946	1-216-821-11	METAL CHIP	1K	5%	1/16W
R947	1-216-841-11	METAL CHIP	47K	5%	1/16W
R948	1-216-841-11	METAL CHIP	47K	5%	1/16W
R949	1-216-809-11	METAL CHIP	100	5%	1/16W
R950	1-216-809-11	METAL CHIP	100	5%	1/16W
R951	1-216-809-11	METAL CHIP	100	5%	1/16W
R952	1-216-843-11	METAL CHIP	68K	5%	1/16W
R953	1-216-821-11	METAL CHIP	1K	5%	1/16W
R954	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R955	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R956	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R957	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R958	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R960	1-216-809-11	METAL CHIP	100	5%	1/16W
R961	1-216-809-11	METAL CHIP	100	5%	1/16W
R962	1-216-809-11	METAL CHIP	100	5%	1/16W
R963	1-216-809-11	METAL CHIP	100	5%	1/16W
R964	1-216-073-00	METAL CHIP	10K	5%	1/10W
R965	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R966	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R969	1-218-713-11	METAL CHIP	7.5K	0.5%	1/16W
R970	1-218-722-11	METAL CHIP	18K	0.5%	1/16W
R971	1-216-049-11	METAL CHIP	1K	5%	1/10W
R972	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R973	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R974	1-216-180-00	RES, CHIP	180	5%	1/8W
R975	1-216-180-00	RES, CHIP	180	5%	1/8W
R976	1-216-180-00	RES, CHIP	180	5%	1/8W
R977	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R978	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R979	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R980	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R982	1-216-864-11	METAL CHIP	0	5%	1/16W
R983	1-218-825-11	METAL CHIP	2.2K	5%	1/16W
R984	1-216-049-11	METAL CHIP	1K	5%	1/10W
		< ROTARY ENCODER >			
RE900	1-475-014-11	ENCODER, ROTARY (VOLUME/BASS/TREBLE/BALANCE/FADER CONTROL)			
		< SWITCH >			
S900	1-771-290-11	SWITCH, SLIDE (SEEK/AMS, ▶▶I ▶▶ +, I◀◀ ◀◀ –)			
**********					
*	A-3294-726-A	MAIN BOARD, COMPLETE **********			
*	3-022-317-01	BRACKET (AMP)			
	7-685-794-09	SCREW +PTT 2.6X10 (S)			
		< BUZZER >			
BZ500	1-504-920-11	BUZZER			
		< CAPACITOR >			
C101	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C102	1-117-681-11	ELECT CHIP	100uF	20%	16V
C103	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C104	1-117-681-11	ELECT CHIP	100uF	20%	16V
C105	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C106	1-117-681-11	ELECT CHIP	100uF	20%	16V
C107	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C108	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C109	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C110	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C112	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C113	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C114	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C115	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C151	1-104-913-11	TANTALUM CHIP	10uF	20%	16V

Ref. No.	Part No.	Description			Remark
C152	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C153	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C154	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C155	1-104-913-11	TANTALUM CHIP	10uF	20%	16V
C156	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C157	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C158	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C159	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C161	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C162	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C164	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C165	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C167	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C168	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C169	1-164-344-11	CERAMIC CHIP	0.068uF	10%	25V
C170	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C171	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C181	1-126-204-11	ELECT CHIP	47uF	20%	16V
C182	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C254	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C271	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C272	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C291	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C292	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C293	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C301	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C314	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C316	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C319	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C320	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C321	1-126-246-11	ELECT CHIP	220uF	20%	4V
C323	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C324	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C327	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C328	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C329	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C333	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C334	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C335	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C336	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C337	1-104-851-11	TANTALUM CHIP	10uF	20%	10V
C338	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C339	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C341	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C353	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C401	1-117-681-11	ELECT CHIP	100uF	20%	16V
C402	1-126-246-11	ELECT CHIP	220uF	20%	4V
C403	1-117-681-11	ELECT CHIP	100uF	20%	16V
C404	1-117-681-11	ELECT CHIP	100uF	20%	16V
C405	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C406	1-126-395-11	ELECT	22uF	20%	16V
C407	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C408	1-117-681-11	ELECT CHIP	100uF	20%	16V
C409	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C410	1-124-779-00	ELECT CHIP	10uF	20%	16V
C422	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C423	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C424	1-117-681-11	ELECT CHIP	100uF	20%	16V
C425	1-126-204-11	ELECT CHIP	47uF	20%	16V
C431	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C441	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C463	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C464	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C465	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C466	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C467	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C468	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C471	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C472	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C473	1-117-681-11	ELECT CHIP	100uF	20%	16V
C474	1-164-346-11	CERAMIC CHIP	1uF		16V
C475	1-126-395-11	ELECT	22uF	20%	16V
C477	1-115-469-31	ELECT	4700uF	99%	16V
C479	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C481	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C482	1-126-204-11	ELECT CHIP	47uF	20%	16V
C483	1-126-197-11	ELECT CHIP	10uF	20%	50V
C485	1-127-820-11	CERAMIC	4.7uF		16V
C486	1-127-820-11	CERAMIC	4.7uF		16V
C487	1-127-820-11	CERAMIC	4.7uF		16V
C488	1-127-820-11	CERAMIC	4.7uF		16V
C489	1-164-346-11	CERAMIC CHIP	1uF		16V
C490	1-164-346-11	CERAMIC CHIP	1uF		16V
C491	1-164-346-11	CERAMIC CHIP	1uF		16V
C492	1-164-346-11	CERAMIC CHIP	1uF		16V
C501	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C502	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C503	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C504	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C505	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C506	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C507	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C509	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C510	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C511	1-125-565-11	DOUBLE LAYER	0.22F		5.5V
C512	1-125-565-11	DOUBLE LAYER	0.22F		5.5V
C513	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C514	1-163-017-00	CERAMIC CHIP	0.0047uF	10%	50V
C535	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C557	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C562	1-125-817-11	CERAMIC CHIP	10uF	10%	6.3V
C601	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C602	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C603	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C604	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C605	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C606	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C607	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C608	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C609	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C611	1-124-779-00	ELECT CHIP	10uF	20%	16V
C612	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C613	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C615	1-126-204-11	ELECT CHIP	47uF	20%	16V
C616	1-164-506-11	CERAMIC CHIP	4.7uF		16V

MAIN

Ref. No.	Part No.	Description			Remark
C617	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C618	1-117-681-11	ELECT CHIP	100uF	20%	16V
C619	1-117-681-11	ELECT CHIP	100uF	20%	16V
C620	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C621	1-124-779-00	ELECT CHIP	10uF	20%	16V
C622	1-124-779-00	ELECT CHIP	10uF	20%	16V
C623	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C624	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C626	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C631	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C632	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C633	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C634	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C635	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C636	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C637	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C638	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C639	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C641	1-124-779-00	ELECT CHIP	10uF	20%	16V
C642	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C643	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C645	1-126-204-11	ELECT CHIP	47uF	20%	16V
C646	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C647	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C648	1-117-681-11	ELECT CHIP	100uF	20%	16V
C649	1-117-681-11	ELECT CHIP	100uF	20%	16V
C650	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C651	1-124-779-00	ELECT CHIP	10uF	20%	16V
C652	1-124-779-00	ELECT CHIP	10uF	20%	16V
C653	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C654	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C656	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C657	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C658	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C659	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C660	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C661	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C662	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C664	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C665	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C666	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C669	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C670	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C672	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C673	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C674	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C675	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C676	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C677	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C681	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C682	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C683	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C684	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C685	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C691	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C696	1-124-779-00	ELECT CHIP	10uF	20%	16V
C701	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C703	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C704	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C705	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C706	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C707	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C751	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C752	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C753	1-164-700-11	CERAMIC CHIP	0.68uF		16V
C754	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C755	1-163-037-11	CERAMIC CHIP	0.022uF	10%	50V
C756	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C757	1-115-185-11	CERAMIC CHIP	0.033uF	10%	50V
C771	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C772	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C773	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C774	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C782	1-104-913-11	TANTALUM CHIP	10uF	20%	16V
C784	1-119-751-11	TANTALUM CHIP	22uF	20%	16V
C785	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C786	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C787	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C788	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C789	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C796	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C797	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C798	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C799	1-163-125-00	CERAMIC CHIP	220PF	5%	50V

< CONNECTOR/JACK >

*	CN101	1-506-984-11	PIN, CONNECTOR (PC BOARD) 2P (ANT)
*	CN202	1-750-161-21	CONNECTOR, FPC 30P
	CN251	1-770-410-11	CONNECTOR, BOARD TO BOARD 18P
	CN271	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL IN)
*	CN291	1-564-506-11	PLUG, CONNECTOR 3P
	CN401	1-779-823-21	CONNECTOR, BOARD TO BOARD 30P
	CNJ252	1-691-258-21	JACK (MIC)
	CNJ272	1-566-822-41	JACK (REMOTE IN)
	CNP401	1-774-701-11	PIN, CONNECTOR 16P (POWER)
	CNP601	1-774-700-21	JACK, PIN 6P (LINE OUT FRONT, LINE OUT REAR, BUS AUDIO IN)

< COMPOSITION CIRCUIT BLOCK >

	CP101	1-803-335-21	ABSORBER, CHIP SURGE

< DIODE >

	D181	8-719-047-98	DIODE HZU5.6B2TRF
	D204	8-719-914-44	DIODE DAP202K-T-146
	D251	8-719-071-71	DIODE HZU8.2B2TRF
	D252	8-719-071-71	DIODE HZU8.2B2TRF
	D253	8-719-071-71	DIODE HZU8.2B2TRF
	D254	8-719-914-44	DIODE DAP202K-T-146
	D255	8-719-071-71	DIODE HZU8.2B2TRF
	D256	8-719-071-71	DIODE HZU8.2B2TRF
	D257	8-719-071-71	DIODE HZU8.2B2TRF
	D258	8-719-071-71	DIODE HZU8.2B2TRF
	D259	8-719-071-71	DIODE HZU8.2B2TRF
	D260	8-719-071-71	DIODE HZU8.2B2TRF
	D261	8-719-071-71	DIODE HZU8.2B2TRF
	D262	8-719-071-71	DIODE HZU8.2B2TRF

Ref. No.	Part No.	Description	Remark
D263	8-719-071-25	DIODE HZU18B2TRF	
D264	8-719-071-25	DIODE HZU18B2TRF	
D265	8-719-071-25	DIODE HZU18B2TRF	
D271	8-719-938-75	DIODE SB05-05CP-TB	
D272	8-719-064-08	DIODE HZU6.8B2TRF	
D273	8-719-071-25	DIODE HZU18B2TRF	
D274	8-719-071-25	DIODE HZU18B2TRF	
D275	8-719-064-03	DIODE HZU16B2TRF	
D276	8-719-105-99	DIODE HZU6.2B2TRF	
D277	8-719-073-01	DIODE MA111-TX	
D278	8-719-073-01	DIODE MA111-TX	
D279	8-719-071-71	DIODE HZU8.2B2TRF	
D280	8-719-071-71	DIODE HZU8.2B2TRF	
D282	8-719-073-01	DIODE MA111-TX	
D283	8-719-073-01	DIODE MA111-TX	
D291	8-719-941-23	DIODE DA204UT106	
D403	8-719-914-43	DIODE DAN202K-T-146	
D421	8-719-977-03	DIODE MA8056-H-TX	
D422	8-719-981-59	DIODE FC805-TL	
D423	8-719-938-75	DIODE SB05-05CP-TB	
D424	8-719-981-59	DIODE FC805-TL	
D431	8-719-064-08	DIODE HZU6.8B2TRF	
D432	8-719-914-43	DIODE DAN202K-T-146	
D441	8-719-914-43	DIODE DAN202K-T-146	
D442	8-719-064-08	DIODE HZU6.8B2TRF	
D461	8-719-420-51	DIODE MA729	
D462	8-719-071-25	DIODE HZU18B2TRF	
D463	8-719-071-25	DIODE HZU18B2TRF	
D464	8-719-071-25	DIODE HZU18B2TRF	
D466	8-719-071-25	DIODE HZU18B2TRF	
D467	8-719-053-18	DIODE 1SR154-400TE-25	
D468	8-719-053-18	DIODE 1SR154-400TE-25	
D471	8-719-073-01	DIODE MA111-TX	
D472	8-719-073-01	DIODE MA111-TX	
D477	8-719-049-38	DIODE 1N5404TU	
D481	8-719-076-95	DIODE PTZ-TE25-18B	
D482	8-719-076-95	DIODE PTZ-TE25-18B	
D483	8-719-076-95	DIODE PTZ-TE25-18B	
D484	8-719-076-95	DIODE PTZ-TE25-18B	
D485	8-719-076-95	DIODE PTZ-TE25-18B	
D486	8-719-076-95	DIODE PTZ-TE25-18B	
D487	8-719-076-95	DIODE PTZ-TE25-18B	
D488	8-719-076-95	DIODE PTZ-TE25-18B	
D489	8-719-064-03	DIODE HZU16B2TRF	
D491	8-719-062-37	DIODE HZU3.9B1TRF	
D527	8-719-073-01	DIODE MA111-TX	
D546	8-719-071-71	DIODE HZU8.2B2TRF	
D555	8-719-976-99	DIODE HZU5.1B2TRF	
D601	8-719-941-23	DIODE DA204UT106	
D631	8-719-941-23	DIODE DA204UT106	
D661	8-719-941-23	DIODE DA204UT106	
D701	8-719-073-01	DIODE MA111-TX	
D702	8-719-073-01	DIODE MA111-TX	
D751	8-719-062-37	DIODE HZU3.9B1TRF	
		< FERRITE BEAD/SHORT/RESISTOR >	
FB204	1-500-240-22	FERRITE 0uH	
FB205	1-500-240-22	FERRITE 0uH	
FB206	1-500-240-22	FERRITE 0uH	
FB301	1-216-295-00	SHORT 0	
FB302	1-216-295-00	SHORT 0	
FB303	1-500-240-22	FERRITE 0uH	
FB304	1-216-033-00	RES, CHIP 220 5%	1/10W
FB305	1-500-240-22	FERRITE 0uH	
FB401	1-216-295-00	SHORT 0	
FB402	1-500-240-22	FERRITE 0uH	
		< IC >	
IC151	8-759-586-54	IC TDA7427ADTR	
IC271	8-759-593-98	IC BA8270FV-E2	
IC300	8-752-395-98	IC CXD2727Q	
IC351	8-759-524-05	IC TC74VHC126FT (EL)	
IC401	8-759-710-88	IC NJM431U-TE2	
IC402	8-759-643-48	IC BA00ASFP-E2	
IC403	8-759-476-23	IC BA08SFP-E2	
IC404	8-759-460-72	IC BA033FP-E2	
IC421	8-759-525-98	IC RN5VL45CA-TL	
IC481	8-759-486-44	IC TDA7386	
IC500	8-759-593-49	IC MB90574APMT-G-214-BND	
IC506	8-759-571-49	IC XC61AN4102PR	
IC507	8-759-495-76	IC RN5VD33AA-TL	
IC601	8-759-385-17	IC NJM4580E (TE2)	
IC602	8-759-594-52	IC LM1973MX	
IC603	8-759-394-84	IC NJM072BM-TE2	
IC604	8-759-593-97	IC NJM2160AM-TE2	
IC631	8-759-385-17	IC NJM4580E (TE2)	
IC632	8-759-594-52	IC LM1973MX	
IC633	8-759-394-84	IC NJM072BM-TE2	
IC634	8-759-593-97	IC NJM2160AM-TE2	
IC661	8-759-385-17	IC NJM4580E (TE2)	
IC663	8-759-394-84	IC NJM072BM-TE2	
IC691	8-759-488-29	IC TC7W66FU (TE12L)	
IC701	8-759-593-99	IC HD6432355A08F	
IC702	8-759-277-63	IC TC7W14FU (TE12R)	
IC752	8-759-488-29	IC TC7W66FU (TE12L)	
IC771	8-759-473-80	IC BA3131FS-E2	
		< SHORT >	
JC100	1-216-295-00	SHORT 0	
JC101	1-216-295-00	SHORT 0	
JC251	1-216-295-00	SHORT 0	
		< COIL >	
L181	1-412-060-11	INDUCTOR CHIP 22uH	
L401	1-412-058-11	INDUCTOR CHIP 10uH	
L402	1-412-054-21	INDUCTOR CHIP 2.2uH	
L403	1-412-054-21	INDUCTOR CHIP 2.2uH	
L404	1-412-058-11	INDUCTOR CHIP 10uH	
L506	1-412-060-11	INDUCTOR CHIP 22uH	
L701	1-412-060-11	INDUCTOR CHIP 22uH	
		< TRANSISTOR >	
Q131	8-729-029-14	TRANSISTOR DTC144EUA-T106	
Q132	8-729-921-25	TRANSISTOR FMC2-T148	
Q133	8-729-905-35	TRANSISTOR 2SC4081T106R	

MAIN

Ref. No.	Part No.	Description		Remark
Q180	8-729-904-63	TRANSISTOR	DTB123YK-T-146	
Q181	8-729-029-14	TRANSISTOR	DTC144EUA-T106	
Q182	8-729-904-63	TRANSISTOR	DTB123YK-T-146	
Q183	8-729-029-14	TRANSISTOR	DTC144EUA-T106	
Q185	8-729-920-85	TRANSISTOR	2SD1664-T101-QR	
Q251	8-729-025-48	TRANSISTOR	XN4381-TX	
Q253	1-801-806-11	TRANSISTOR	DTC144EK-T146	
Q254	8-729-026-53	TRANSISTOR	2SA1576A-T106-QR	
Q255	8-729-905-35	TRANSISTOR	2SC4081T106R	
Q256	8-729-106-60	TRANSISTOR	2SB1132-T101-QR	
Q271	1-801-806-11	TRANSISTOR	DTC144EK-T146	
Q272	8-729-028-91	TRANSISTOR	DTA144EUA-T106	
Q273	8-729-120-28	TRANSISTOR	2SC2412K-T-146-QR	
Q274	8-729-120-28	TRANSISTOR	2SC2412K-T-146-QR	
Q275	8-729-028-91	TRANSISTOR	DTA144EUA-T106	
Q401	8-729-920-85	TRANSISTOR	2SD1664-T101-QR	
Q402	8-729-106-60	TRANSISTOR	2SB1132-T101-QR	
Q403	1-801-806-11	TRANSISTOR	DTC144EK-T146	
Q421	8-729-822-84	TRANSISTOR	2SB1202FAT-TL	
Q422	8-729-230-49	TRANSISTOR	2SC2712-YG-TE85L	
Q423	1-801-806-11	TRANSISTOR	DTC144EK-T146	
Q424	1-801-806-11	TRANSISTOR	DTC144EK-T146	
Q431	8-729-120-28	TRANSISTOR	2SC2412K-T-146-QR	
Q441	8-729-905-35	TRANSISTOR	2SC4081T106R	
Q451	8-729-905-35	TRANSISTOR	2SC4081T106R	
Q461	8-729-049-13	TRANSISTOR	UPA1853GR-9JG-E1	
Q462	8-729-429-92	TRANSISTOR	XN1211-TX	
Q471	1-801-806-11	TRANSISTOR	DTC144EK-T146	
Q472	8-729-026-53	TRANSISTOR	2SA1576A-T106-QR	
Q473	8-729-921-25	TRANSISTOR	FMC2-T148	
Q474	8-729-921-25	TRANSISTOR	FMC2-T148	
Q501	8-729-028-91	TRANSISTOR	DTA144EUA-T106	
Q504	8-729-029-14	TRANSISTOR	DTC144EUA-T106	
Q523	8-729-024-31	TRANSISTOR	XN1111-TX	
Q601	8-729-400-56	TRANSISTOR	2SD1328-T-TX	
Q602	8-729-400-56	TRANSISTOR	2SD1328-T-TX	
Q631	8-729-400-56	TRANSISTOR	2SD1328-T-TX	
Q632	8-729-400-56	TRANSISTOR	2SD1328-T-TX	
Q661	8-729-400-56	TRANSISTOR	2SD1328-T-TX	
Q662	8-729-400-56	TRANSISTOR	2SD1328-T-TX	
Q691	8-729-029-14	TRANSISTOR	DTC144EUA-T106	
Q751	8-729-921-25	TRANSISTOR	FMC2-T148	
Q752	8-729-047-71	TRANSISTOR	FMG12-T-148	
Q753	8-729-920-21	TRANSISTOR	DTC314TK-T-146	

< RESISTOR >

R101	1-216-025-00	RES, CHIP	100	5%	1/10W
R102	1-216-037-00	METAL CHIP	330	5%	1/10W
R104	1-216-073-00	METAL CHIP	10K	5%	1/10W
R105	1-216-081-00	METAL CHIP	22K	5%	1/10W
R106	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R114	1-216-864-11	METAL CHIP	0	5%	1/16W
R124	1-216-037-00	METAL CHIP	330	5%	1/10W
R133	1-216-821-11	METAL CHIP	1K	5%	1/16W
R134	1-216-841-11	RES, CHIP	47K	5%	1/16W
R135	1-216-845-11	METAL CHIP	100K	5%	1/16W
R151	1-216-017-00	RES, CHIP	47	5%	1/10W
R153	1-216-001-00	METAL CHIP	10	5%	1/10W
R154	1-216-813-11	METAL CHIP	220	5%	1/16W
R155	1-216-813-11	METAL CHIP	220	5%	1/16W
R157	1-216-025-00	RES, CHIP	100	5%	1/10W
R158	1-216-073-00	METAL CHIP	10K	5%	1/10W
R159	1-216-073-00	METAL CHIP	10K	5%	1/10W
R160	1-216-097-00	RES, CHIP	100K	5%	1/10W
R161	1-216-077-00	RES, CHIP	15K	5%	1/10W
R162	1-216-083-00	METAL CHIP	27K	5%	1/10W
R181	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R182	1-216-065-00	RES, CHIP	4.7K	5%	1/10W
R202	1-216-295-00	SHORT	0		
R251	1-218-710-11	RES, CHIP	5.6K	0.5%	1/16W
R252	1-218-704-11	RES, CHIP	3.3K	0.5%	1/16W
R253	1-216-845-11	METAL CHIP	100K	5%	1/16W
R254	1-216-049-11	RES, CHIP	1K	5%	1/10W
R255	1-216-025-00	RES, CHIP	100	5%	1/10W
R256	1-216-025-00	RES, CHIP	100	5%	1/10W
R257	1-216-833-11	RES, CHIP	10K	5%	1/16W
R258	1-216-833-11	RES, CHIP	10K	5%	1/16W
R259	1-208-462-41	RES, CHIP	10K	2%	1/10W
R260	1-208-462-41	RES, CHIP	10K	2%	1/10W
R262	1-216-049-11	RES, CHIP	1K	5%	1/10W
R263	1-216-049-11	RES, CHIP	1K	5%	1/10W
R264	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R265	1-216-041-11	METAL CHIP	470	5%	1/10W
R271	1-216-001-00	METAL CHIP	10	5%	1/10W
R272	1-216-073-00	METAL CHIP	10K	5%	1/10W
R273	1-216-025-00	RES, CHIP	100	5%	1/10W
R274	1-216-025-00	RES, CHIP	100	5%	1/10W
R275	1-216-841-11	METAL CHIP	47K	5%	1/16W
R276	1-216-841-11	METAL CHIP	47K	5%	1/16W
R277	1-216-845-11	METAL CHIP	100K	5%	1/16W
R278	1-216-845-11	METAL CHIP	100K	5%	1/16W
R279	1-216-025-00	RES, CHIP	100	5%	1/10W
R280	1-216-025-00	RES, CHIP	100	5%	1/10W
R281	1-208-462-41	RES, CHIP	10K	2%	1/10W
R282	1-208-462-41	RES, CHIP	10K	2%	1/10W
R283	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R285	1-216-841-11	METAL CHIP	47K	5%	1/16W
R291	1-218-732-11	METAL CHIP	47K	0.5%	1/16W
R292	1-218-732-11	METAL CHIP	47K	0.5%	1/16W
R293	1-216-627-11	METAL CHIP	100	0.5%	1/10W
R294	1-216-627-11	METAL CHIP	100	0.5%	1/10W
R331	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R333	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R334	1-216-821-11	METAL CHIP	1K	5%	1/16W
R335	1-216-821-11	METAL CHIP	1K	5%	1/16W
R337	1-216-821-11	METAL CHIP	1K	5%	1/16W
R341	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R342	1-216-089-00	RES, CHIP	47K	5%	1/10W
R352	1-216-295-00	SHORT	0		
R353	1-216-295-00	SHORT	0		
R354	1-216-295-00	SHORT	0		
R401	1-216-033-00	METAL CHIP	220	5%	1/10W
R402	1-216-045-00	METAL CHIP	680	5%	1/10W
R403	1-216-033-00	METAL CHIP	220	5%	1/10W
R404	1-216-041-00	METAL CHIP	470	5%	1/10W

Ref. No.	Part No.	Description			Remark
R405	1-216-045-00	METAL CHIP	680	5%	1/10W
R406	1-216-065-00	RES, CHIP	4.7K	5%	1/10W
R408	1-216-295-00	SHORT	0		
R411	1-216-295-00	SHORT	0		
R421	1-216-089-00	RES, CHIP	47K	5%	1/10W
R422	1-216-680-11	METAL CHIP	16K	0.5%	1/10W
R423	1-216-661-11	METAL CHIP	2.7K	0.5%	1/10W
R430	1-216-821-11	METAL CHIP	1K	5%	1/16W
R431	1-216-081-00	METAL CHIP	22K	5%	1/10W
R432	1-216-081-00	METAL CHIP	22K	5%	1/10W
R434	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R441	1-216-839-11	METAL CHIP	33K	5%	1/16W
R442	1-216-841-11	METAL CHIP	47K	5%	1/16W
R443	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R444	1-216-841-11	METAL CHIP	47K	5%	1/16W
R451	1-216-833-11	RES, CHIP	10K	5%	1/16W
R452	1-216-833-11	RES, CHIP	10K	5%	1/16W
R453	1-216-845-11	METAL CHIP	100K	5%	1/16W
R454	1-216-839-11	METAL CHIP	33K	5%	1/16W
R461	1-216-073-00	METAL CHIP	10K	5%	1/10W
R462	1-216-073-00	METAL CHIP	10K	5%	1/10W
R463	1-216-073-00	METAL CHIP	10K	5%	1/10W
R464	1-216-073-00	METAL CHIP	10K	5%	1/10W
R466	1-216-833-11	RES, CHIP	10K	5%	1/16W
R471	1-216-073-00	METAL CHIP	10K	5%	1/10W
R472	1-216-833-11	RES, CHIP	10K	5%	1/16W
R473	1-216-809-11	RES, CHIP	100	5%	1/16W
R474	1-216-821-11	METAL CHIP	1K	5%	1/16W
R475	1-216-837-11	METAL CHIP	22K	5%	1/16W
R476	1-216-821-11	METAL CHIP	1K	5%	1/16W
R477	1-216-049-11	RES, CHIP	1K	5%	1/10W
R478	1-216-845-11	METAL CHIP	100K	5%	1/16W
R481	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R482	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R483	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R484	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R485	1-216-837-11	METAL CHIP	22K	5%	1/16W
R486	1-216-837-11	METAL CHIP	22K	5%	1/16W
R487	1-216-837-11	METAL CHIP	22K	5%	1/16W
R488	1-216-837-11	METAL CHIP	22K	5%	1/16W
R501	1-216-097-00	RES, CHIP	100K	5%	1/10W
R502	1-216-821-11	METAL CHIP	1K	5%	1/16W
R503	1-216-864-11	METAL CHIP	0	5%	1/16W
R505	1-216-097-00	RES, CHIP	100K	5%	1/10W
R506	1-216-813-11	METAL CHIP	220	5%	1/16W
R509	1-216-033-00	METAL CHIP	220	5%	1/10W
R510	1-216-097-00	RES, CHIP	100K	5%	1/10W
R512	1-216-845-11	METAL CHIP	100K	5%	1/16W
R513	1-216-295-00	SHORT	0		
R514	1-216-033-00	METAL CHIP	220	5%	1/10W
R515	1-216-033-00	METAL CHIP	220	5%	1/10W
R516	1-216-813-11	METAL CHIP	220	5%	1/16W
R517	1-216-813-11	METAL CHIP	220	5%	1/16W
R519	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R520	1-216-097-00	RES, CHIP	100K	5%	1/10W
R521	1-216-845-11	METAL CHIP	100K	5%	1/16W
R522	1-216-097-00	RES, CHIP	100K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R523	1-216-853-11	METAL CHIP	470K	5%	1/16W
R524	1-216-295-00	SHORT	0		
R525	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R526	1-216-097-00	RES, CHIP	100K	5%	1/10W
R528	1-216-295-00	SHORT	0		
R551	1-216-841-11	METAL CHIP	47K	5%	1/16W
R585	1-216-845-11	METAL CHIP	100K	5%	1/16W
R587	1-216-097-00	RES, CHIP	100K	5%	1/10W
R591	1-216-839-11	METAL CHIP	33K	5%	1/16W
R595	1-216-049-11	RES, CHIP	1K	5%	1/10W
R601	1-218-711-11	METAL CHIP	6.2K	0.5%	1/10W
R602	1-216-073-00	METAL CHIP	10K	5%	1/10W
R603	1-216-841-11	METAL CHIP	47K	5%	1/16W
R604	1-218-711-11	METAL CHIP	6.2K	0.5%	1/10W
R605	1-216-073-00	METAL CHIP	10K	5%	1/10W
R606	1-216-841-11	METAL CHIP	47K	5%	1/16W
R607	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R608	1-216-667-11	METAL CHIP	4.7K	0.5%	1/10W
R609	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R610	1-216-667-11	METAL CHIP	4.7K	0.5%	1/10W
R612	1-202-926-11	RES, CHIP	36K	5%	1/16W
R613	1-218-293-11	RES, CHIP	24K	5%	1/16W
R614	1-218-293-11	RES, CHIP	24K	5%	1/16W
R615	1-202-926-11	RES, CHIP	36K	5%	1/16W
R616	1-216-833-11	RES, CHIP	10K	5%	1/16W
R617	1-216-833-11	RES, CHIP	10K	5%	1/16W
R618	1-216-033-00	METAL CHIP	220	5%	1/10W
R619	1-216-049-11	RES, CHIP	1K	5%	1/10W
R620	1-216-049-11	RES, CHIP	1K	5%	1/10W
R621	1-216-033-00	METAL CHIP	220	5%	1/10W
R622	1-216-081-00	METAL CHIP	22K	5%	1/10W
R623	1-216-081-00	METAL CHIP	22K	5%	1/10W
R627	1-216-833-11	RES, CHIP	10K	5%	1/16W
R628	1-216-833-11	RES, CHIP	10K	5%	1/16W
R629	1-216-833-11	RES, CHIP	10K	5%	1/16W
R630	1-216-833-11	RES, CHIP	10K	5%	1/16W
R631	1-218-711-11	METAL CHIP	6.2K	0.5%	1/10W
R632	1-216-073-00	METAL CHIP	10K	5%	1/10W
R633	1-216-841-11	METAL CHIP	47K	5%	1/16W
R634	1-218-711-11	METAL CHIP	6.2K	0.5%	1/10W
R635	1-216-073-00	METAL CHIP	10K	5%	1/10W
R636	1-216-841-11	METAL CHIP	47K	5%	1/16W
R637	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R638	1-216-667-11	METAL CHIP	4.7K	0.5%	1/10W
R639	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R640	1-216-667-11	METAL CHIP	4.7K	0.5%	1/10W
R642	1-202-926-11	RES, CHIP	36K	5%	1/16W
R643	1-218-293-11	RES, CHIP	24K	5%	1/16W
R644	1-218-293-11	RES, CHIP	24K	5%	1/16W
R645	1-202-926-11	RES, CHIP	36K	5%	1/16W
R646	1-216-833-11	RES, CHIP	10K	5%	1/16W
R647	1-216-833-11	RES, CHIP	10K	5%	1/16W
R648	1-216-033-00	METAL CHIP	220	5%	1/10W
R649	1-216-049-11	RES, CHIP	1K	5%	1/10W
R650	1-216-049-11	RES, CHIP	1K	5%	1/10W
R651	1-216-033-00	METAL CHIP	220	5%	1/10W
R652	1-216-081-00	METAL CHIP	22K	5%	1/10W
R653	1-216-081-00	METAL CHIP	22K	5%	1/10W

MAIN POWER

Ref. No.	Part No.	Description			Remark
R657	1-216-073-00	METAL CHIP	10K	5%	1/10W
R658	1-216-073-00	METAL CHIP	10K	5%	1/10W
R661	1-216-073-00	METAL CHIP	10K	5%	1/10W
R662	1-216-073-00	METAL CHIP	10K	5%	1/10W
R663	1-216-089-00	RES, CHIP	47K	5%	1/10W
R667	1-218-720-11	METAL CHIP	15K	0.5%	1/16W
R668	1-218-730-11	METAL CHIP	39K	0.5%	1/16W
R669	1-218-720-11	METAL CHIP	15K	0.5%	1/16W
R670	1-218-730-11	METAL CHIP	39K	0.5%	1/16W
R678	1-216-033-00	METAL CHIP	220	5%	1/10W
R679	1-216-049-11	RES, CHIP	1K	5%	1/10W
R680	1-216-049-11	RES, CHIP	1K	5%	1/10W
R681	1-216-033-00	METAL CHIP	220	5%	1/10W
R682	1-216-081-00	METAL CHIP	22K	5%	1/10W
R683	1-216-081-00	METAL CHIP	22K	5%	1/10W
R691	1-216-833-11	RES, CHIP	10K	5%	1/16W
R692	1-216-833-11	RES, CHIP	10K	5%	1/16W
R693	1-216-841-11	METAL CHIP	47K	5%	1/16W
R695	1-216-845-11	METAL CHIP	100K	5%	1/16W
R696	1-216-845-11	METAL CHIP	100K	5%	1/16W
R701	1-216-845-11	METAL CHIP	100K	5%	1/16W
R702	1-216-845-11	METAL CHIP	100K	5%	1/16W
R703	1-216-845-11	METAL CHIP	100K	5%	1/16W
R704	1-216-033-00	METAL CHIP	220	5%	1/10W
R705	1-216-033-00	METAL CHIP	220	5%	1/10W
R706	1-216-033-00	METAL CHIP	220	5%	1/10W
R707	1-216-097-00	RES, CHIP	100K	5%	1/10W
R709	1-216-041-11	METAL CHIP	470	5%	1/10W
R710	1-216-033-00	METAL CHIP	220	5%	1/10W
R711	1-216-097-00	RES, CHIP	100K	5%	1/10W
R713	1-216-809-11	METAL CHIP	100	5%	1/16W
R714	1-216-864-11	METAL CHIP	0	5%	1/16W
R715	1-216-845-11	METAL CHIP	100K	5%	1/16W
R717	1-216-845-11	METAL CHIP	100K	5%	1/16W
R718	1-216-845-11	METAL CHIP	100K	5%	1/16W
R720	1-216-097-00	RES, CHIP	100K	5%	1/10W
R751	1-216-813-11	METAL CHIP	220	5%	1/16W
R752	1-216-813-11	METAL CHIP	220	5%	1/16W
R753	1-216-081-00	METAL CHIP	22K	5%	1/10W
R754	1-216-081-00	METAL CHIP	22K	5%	1/10W
R756	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R757	1-216-081-00	METAL CHIP	22K	0.5%	1/10W
R760	1-216-841-11	METAL CHIP	47K	5%	1/16W
R761	1-216-841-11	METAL CHIP	47K	5%	1/16W
R762	1-216-841-11	METAL CHIP	47K	5%	1/16W
R763	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R765	1-216-097-00	RES, CHIP	100K	5%	1/10W
R771	1-218-732-11	METAL CHIP	47K	0.5%	1/16W
R772	1-218-732-11	METAL CHIP	47K	0.5%	1/16W
R773	1-218-714-11	METAL CHIP	8.2K	0.5%	1/16W
R774	1-218-720-11	METAL CHIP	15K	0.5%	1/16W
R775	1-218-704-11	METAL CHIP	3.3K	0.5%	1/16W
R776	1-218-706-11	METAL CHIP	3.9K	0.5%	1/16W
R777	1-218-724-11	METAL CHIP	22K	0.5%	1/16W
R778	1-218-712-11	METAL CHIP	6.8K	0.5%	1/16W
R779	1-218-714-11	METAL CHIP	8.2K	0.5%	1/16W
R780	1-218-720-11	METAL CHIP	15K	0.5%	1/16W
R781	1-218-732-11	METAL CHIP	47K	0.5%	1/16W
R782	1-218-704-11	METAL CHIP	3.3K	0.5%	1/16W
R783	1-218-706-11	METAL CHIP	3.9K	0.5%	1/16W
R784	1-218-724-11	METAL CHIP	22K	0.5%	1/16W
R785	1-218-712-11	METAL CHIP	6.8K	0.5%	1/16W
R786	1-218-732-11	METAL CHIP	47K	0.5%	1/16W
R787	1-216-665-11	METAL CHIP	3.9K	0.5%	1/10W
R788	1-216-665-11	METAL CHIP	3.9K	0.5%	1/10W
R789	1-216-665-11	METAL CHIP	3.9K	0.5%	1/10W
R791	1-208-795-11	RES, CHIP	3.6K	2%	1/10W
R792	1-208-795-11	RES, CHIP	3.6K	2%	1/10W
R797	1-216-665-11	METAL CHIP	3.9K	0.5%	1/10W
R798	1-216-665-11	METAL CHIP	3.9K	0.5%	1/10W
R799	1-216-665-11	METAL CHIP	3.9K	0.5%	1/10W
		< COMPOSITION CIRCUIT BLOCK >			
RB251	1-233-412-11	RES, CHIP NETWORK 1K (3216)			
RB252	1-233-412-11	RES, CHIP NETWORK 1K (3216)			
RB301	1-233-578-11	RES, CHIP NETWORK 47K			
RB502	1-233-412-11	RES, CHIP NETWORK 1K (3216)			
RB504	1-216-182-00	RES, CHIP NETWORK 220 (3216)			
RB505	1-233-412-11	RES, CHIP NETWORK 1K (3216)			
RB507	1-216-182-00	RES, CHIP NETWORK 220 (3216)			
		< SWITCH >			
S500	1-762-108-31	SWITCH, PUSH (1 KEY) (NOSE DETECT)			
		< THERMISTOR >			
TH271	1-801-792-21	THERMISTOR, POSITIVE			
TH461	1-809-148-11	THERMISTOR, POSITIVE			
TH462	1-803-615-21	THERMISTOR, POSITIVE			
		< TUNER >			
TU101	A-3282-045-A	TUNER UNIT (TUX-012 (E))			
		< VIBRATOR >			
X151	1-781-361-21	VIBRATOR, CRYSTAL (10.25MHz)			
X300	1-767-408-21	VIBRATOR, CRYSTAL (16.9344MHz)			
X500	1-781-002-21	VIBRATOR, CERAMIC (3.68MHz)			
X501	1-760-928-21	VIBRATOR, CRYSTAL (32.768kHz)			
X701	1-781-030-21	VIBRATOR, CRYSTAL (18.432MHz)			
**********					
*	A-3294-728-A	POWER BOARD, COMPLETE			
		**********			
*	3-036-995-01	BRACKET (POWER)			
		< CAPACITOR >			
C801	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C802	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C803	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C804	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C805	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C806	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C807	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C808	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C809	1-104-913-11	TANTALUM CHIP	10uF	20%	16V
C810	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V

Ref. No.	Part No.	Description			Remark
C811	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C812	1-104-913-11	TANTALUM CHIP	10uF	20%	16V
C813	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C814	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C815	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C816	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C817	1-104-913-11	TANTALUM CHIP	10uF	20%	16V
C818	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C841	1-125-817-11	CERAMIC CHIP	10uF	10%	6.3V
C842	1-115-340-11	CERAMIC CHIP	0.22uF	10%	25V
C844	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C845	1-164-690-11	CERAMIC CHIP	0.0022uF	5%	50V
C846	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C847	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C848	1-164-690-11	CERAMIC CHIP	0.0022uF	5%	50V
C849	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C850	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C851	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C852	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C853	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C854	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C855	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C856	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C857	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C858	1-104-913-11	TANTALUM CHIP	10uF	20%	16V
C859	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C860	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C861	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C862	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C863	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C864	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
C865	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C866	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C871	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C872	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C873	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C874	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C875	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C876	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C877	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C878	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C879	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C880	1-128-975-11	CAPACITOR	22uF		20V
C881	1-128-975-11	CAPACITOR	22uF		20V
C882	1-126-200-11	ELECT CHIP	10uF	20%	35V
C883	1-117-681-11	ELECT CHIP	100uF	20%	16V
C887	1-126-204-11	ELECT CHIP	47uF	20%	16V
C888	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C890	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C891	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
		< CONNECTOR >			
CN801	1-779-821-11	CONNECTOR, BOARD TO BOARD 30P			
		< DIODE >			
D841	8-719-064-08	DIODE HZU6.8B2TRF			
D871	8-719-055-30	DIODE D1FS4A-TA			
D872	8-719-054-47	DIODE D3FS4A-TA			
D891	8-719-976-96	DIODE MA8047-H-TX			
D892	8-719-420-51	DIODE MA729-TX			
		< FERRITE BEAD >			
FB801	1-500-245-11	FERRITE	0uH		
FB802	1-500-245-11	FERRITE	0uH		
FB803	1-500-245-11	FERRITE	0uH		
FB804	1-500-245-11	FERRITE	0uH		
FB805	1-500-245-11	FERRITE	0uH		
FB806	1-469-312-21	ARRAY, FERRITE CHIP			
FB807	1-469-312-21	ARRAY, FERRITE CHIP			
		< IC >			
IC801	8-759-538-27	IC RSC-164			
IC802	8-759-523-81	IC TC74VHC08FT (EL)			
IC803	8-759-639-73	IC MSM534001E-49TSKFDR3			
IC804	8-759-058-64	IC TC7S32FU-TE85L			
IC805	8-759-534-72	IC MBM29F800TA			
IC841	8-759-338-78	IC BA10324AFV-E2			
IC843	8-759-100-96	IC NJM4558M-T2			
IC871	8-759-990-43	IC TL1451ACDB-E20			
		< SHORT >			
JC841	1-216-295-00	SHORT	0		
		< COIL >			
L801	1-412-060-11	INDUCTOR CHIP	22uH		
L802	1-412-058-11	INDUCTOR CHIP	10uH		
L841	1-412-058-11	INDUCTOR CHIP	10uH		
L842	1-412-058-11	INDUCTOR CHIP	10uH		
L871	1-414-408-11	INDUCTOR CHIP	1uH		
L872	1-411-499-11	INDUCTOR	47uH		
L873	1-412-054-21	INDUCTOR CHIP	2.2uH		
L874	1-411-499-11	INDUCTOR	47uH		
L875	1-412-054-21	INDUCTOR CHIP	2.2uH		
		< TRANSISTOR >			
Q801	8-729-904-63	TRANSISTOR	DTB123YK-T-146		
Q802	8-729-029-14	TRANSISTOR	DTC144EUA-T106		
Q841	8-729-920-85	TRANSISTOR	2SD1664-T101-QR		
Q881	8-729-921-25	TRANSISTOR	FMC2-T148		
Q882	8-729-026-59	TRANSISTOR	FMY1A-T148		
Q883	8-729-039-28	TRANSISTOR	HAT1026R-EL		
Q884	8-729-822-84	TRANSISTOR	2SB1202FAT-TL		
Q886	8-729-049-13	TRANSISTOR	UPA1853GR-9JG-E1		
Q887	8-729-429-92	TRANSISTOR	XN1211-TX		
Q890	1-801-806-11	TRANSISTOR	DTC144EK-T146		
		< RESISTOR >			
R801	1-216-864-11	METAL CHIP	0	5%	1/16W
R802	1-216-295-00	SHORT	0		
R803	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R804	1-216-025-00	RES, CHIP	100	5%	1/10W
R805	1-216-025-00	RES, CHIP	100	5%	1/10W
R806	1-216-295-00	SHORT	0		
R807	1-216-295-00	SHORT	0		

POWER **RELAY**

Ref. No.	Part No.	Description			Remark
R808	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R809	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R810	1-216-109-00	METAL CHIP	330K	5%	1/10W
R811	1-216-109-00	METAL CHIP	330K	5%	1/10W
R812	1-216-097-00	RES, CHIP	100K	5%	1/10W
R813	1-216-001-00	METAL CHIP	10	5%	1/10W
R814	1-216-809-11	METAL CHIP	100	5%	1/16W
R815	1-216-809-11	METAL CHIP	100	5%	1/16W
R816	1-216-809-11	METAL CHIP	100	5%	1/16W
R817	1-216-809-11	METAL CHIP	100	5%	1/16W
R818	1-216-809-11	METAL CHIP	100	5%	1/16W
R819	1-216-049-11	RES, CHIP	1K	5%	1/10W
R820	1-216-089-00	RES, CHIP	47K	5%	1/10W
R821	1-216-821-11	METAL CHIP	1K	5%	1/16W
R822	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R841	1-216-025-00	RES, CHIP	100	5%	1/10W
R842	1-216-049-11	RES, CHIP	1K	5%	1/10W
R843	1-216-025-00	RES, CHIP	100	5%	1/10W
R844	1-216-073-00	METAL CHIP	10K	5%	1/10W
R845	1-216-093-11	RES, CHIP	68K	5%	1/10W
R846	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R847	1-216-841-11	METAL CHIP	47K	5%	1/16W
R848	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R849	1-216-855-11	METAL CHIP	680K	5%	1/16W
R850	1-216-091-00	METAL CHIP	56K	5%	1/10W
R851	1-216-073-00	METAL CHIP	10K	5%	1/10W
R852	1-216-081-00	METAL CHIP	22K	5%	1/10W
R853	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R854	1-216-833-11	RES, CHIP	10K	5%	1/16W
R855	1-218-294-11	RES, CHIP	30K	5%	1/16W
R856	1-216-835-11	METAL CHIP	15K	5%	1/16W
R857	1-216-845-11	METAL CHIP	100K	5%	1/16W
R858	1-216-821-11	METAL CHIP	1K	5%	1/16W
R859	1-216-833-11	RES, CHIP	10K	5%	1/16W
R860	1-218-294-11	RES, CHIP	30K	5%	1/16W
R861	1-216-837-11	METAL CHIP	22K	5%	1/16W
R862	1-216-841-11	METAL CHIP	47K	5%	1/16W
R863	1-216-841-11	METAL CHIP	47K	5%	1/16W
R864	1-216-821-11	METAL CHIP	1K	5%	1/16W
R865	1-216-841-11	METAL CHIP	47K	5%	1/16W
R866	1-216-833-11	RES, CHIP	10K	5%	1/16W
R867	1-216-837-11	METAL CHIP	22K	5%	1/16W
R868	1-216-049-11	RES, CHIP	1K	5%	1/10W
R869	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R871	1-216-033-00	RES, CHIP	220	5%	1/10W
R872	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R873	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R874	1-208-445-41	RES, CHIP	2.2K	2%	1/10W
R875	1-208-811-11	RES, CHIP	16K	2%	1/10W
R876	1-216-651-11	METAL CHIP	1K	0.5%	1/10W
R877	1-216-663-11	METAL CHIP	3.3K	0.5%	1/10W
R878	1-216-295-00	SHORT	0		
R881	1-216-077-00	RES, CHIP	15K	5%	1/10W
R882	1-208-811-11	METAL CHIP	16K	0.5%	1/10W
R883	1-216-077-00	RES, CHIP	15K	5%	1/10W
R884	1-216-085-00	METAL CHIP	33K	5%	1/10W
R885	1-216-085-00	METAL CHIP	33K	5%	1/10W
R886	1-216-085-00	METAL CHIP	33K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R887	1-216-085-00	METAL CHIP	33K	5%	1/10W
R888	1-216-039-00	METAL CHIP	390	5%	1/10W
R889	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R890	1-216-813-11	METAL CHIP	220	5%	1/16W
R891	1-216-815-11	METAL CHIP	330	5%	1/16W
R892	1-216-833-11	RES, CHIP	10K	5%	1/16W
R893	1-216-073-00	METAL CHIP	10K	5%	1/10W
R895	1-218-738-11	RES, CHIP	82K	0.5%	1/16W
R896	1-216-065-00	RES, CHIP	4.7K	5%	1/10W
R897	1-216-097-00	RES, CHIP	100K	5%	1/10W
		< COMPOSITION CIRCUIT BLOCK >			
RB801	1-233-576-11	RES, CHIP NETWORK 100			
RB802	1-233-576-11	RES, CHIP NETWORK 100			
RB803	1-233-576-11	RES, CHIP NETWORK 100			
RB804	1-233-576-11	RES, CHIP NETWORK 100			
RB805	1-233-576-11	RES, CHIP NETWORK 100			
RB806	1-233-576-11	RES, CHIP NETWORK 100			
		< VIBRATOR >			
X801	1-781-090-21	VIBRATOR, CRYSTAL (14.318MHz)			
**********					
*	A-3294-730-A	RELAY BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C701	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C702	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C705	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C706	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
		< CONNECTOR >			
CN701	1-793-290-11	SOCKET, CONNECTOR 18P			
CN702	1-779-169-11	SOCKET, CONNECTOR 18P			
		< DIODE >			
D701	8-719-056-84	DIODE HZU7.5B2TRF			
D702	8-719-056-84	DIODE HZU7.5B2TRF			
D703	8-719-056-84	DIODE HZU7.5B2TRF			
D704	8-719-056-84	DIODE HZU7.5B2TRF			
D705	8-719-056-84	DIODE HZU7.5B2TRF			
D706	8-719-056-84	DIODE HZU7.5B2TRF			
D707	8-719-071-25	DIODE HZU18B2TRF			
		< LED >			
LED706	8-719-064-72	LED BG1101F-10-TR (MD DISC SLOT)			
		< SWITCH >			
LSW702	1-771-703-11	SWITCH, KEYBOARD (WITH LED) (⏏)			
		< RESISTOR >			
R701	1-216-033-00	METAL CHIP	220	5%	1/10W
R709	1-216-295-00	SHORT	0		

Ref. No.	Part No.	Description			Remark
		< SWITCH >			
S703	1-572-921-11	SWITCH, KEY BOARD (RESET)			
**********					
	A-3317-834-A	SENSOR BOARD, COMPLETE			
		**********			
For the parts on the SENSOR board,replace the entire mounted board.					
**********					
*	A-3317-836-A	SERVO BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C11	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C301	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C302	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C305	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C306	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C307	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C308	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C309	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C310	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C311	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V
C314	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C315	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C316	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C317	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C318	1-104-852-11	TANTALUM CHIP	22uF	20%	6.3V
C319	1-104-852-11	TANTALUM CHIP	22uF	20%	6.3V
C320	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C321	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C322	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C324	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C325	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
C326	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C327	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C328	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C329	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C330	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C331	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C333	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C334	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C335	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C336	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C337	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C338	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C339	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C342	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C343	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C344	1-104-852-11	TANTALUM CHIP	22uF	20%	6.3V
C345	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C346	1-104-852-11	TANTALUM CHIP	22uF	20%	6.3V
C347	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C348	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C349	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C350	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C351	1-104-852-11	TANTALUM CHIP	22uF	20%	10V
C352	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C353	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C356	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C357	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C358	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C359	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C361	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C362	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C402	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C403	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C501	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C503	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C504	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C505	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C506	1-104-852-11	TANTALUM CHIP	22uF	20%	10V
C510	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C511	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C512	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C513	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C514	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C515	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C516	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< CONNECTOR >			
CN101	1-764-441-21	CONNECTOR, FPC 30P			
CN102	1-573-929-21	CONNECTOR, FFC/FPC (ZIF) 20P			
CN103	1-764-439-21	CONNECTOR, FPC 11P			
		< DIODE >			
D401	8-719-157-93	DIODE DTZ-TT11-3.0B			
D501	8-719-988-61	DIODE 1SS355TE-17			
		< FERRITE BEAD >			
FB302	1-414-760-21	FERRITE 0uH			
		< IC >			
IC301	8-752-384-47	IC CXD2652AR			
IC302	8-752-080-95	IC CXA2523AR			
IC303	8-759-430-25	IC BH6511FS-E2			
IC304	8-759-096-87	IC TC7WU04FU (TE12R)			
IC305	8-759-040-83	IC BA6287F-T1			
IC306	8-759-058-62	IC TC7S08FU (TE85R)			
IC307	8-759-368-16	IC MN41V4400TT-08S			
IC401	8-759-909-71	IC BA4558F-E2			
IC501	8-752-908-41	IC CXP84340-216Q			
IC502	8-759-238-47	IC TC74HCT7007AF (EL)			
IC503	8-759-238-47	IC TC74HCT7007AF (EL)			
		< COIL >			
L301	1-412-058-11	INDUCTOR CHIP	10uH		
L302	1-412-058-11	INDUCTOR CHIP	10uH		
L303	1-412-039-51	INDUCTOR CHIP	100uH		
L304	1-412-039-51	INDUCTOR CHIP	100uH		
L305	1-412-039-51	INDUCTOR CHIP	100uH		
L306	1-412-039-51	INDUCTOR CHIP	100uH		
L501	1-412-058-11	INDUCTOR CHIP	10uH		

SERVO

Ref. No.	Part No.	Description			Remark
		< TRANSISTOR >			
Q301	8-729-230-49	TRANSISTOR	2SC2712Y-TE85L		
Q302	8-729-026-49	TRANSISTOR	2SA1037AK-T146-QR		
Q401	8-729-920-85	TRANSISTOR	2SD1664-T101-QR		
Q402	8-729-106-60	TRANSISTOR	2SB1132-T101-QR		
Q403	8-729-421-22	TRANSISTOR	UN2211-TX		
		< RESISTOR >			
R301	1-216-809-11	METAL CHIP	100	5%	1/16W
R302	1-216-809-11	METAL CHIP	100	5%	1/16W
R303	1-216-809-11	METAL CHIP	100	5%	1/16W
R304	1-216-809-11	METAL CHIP	100	5%	1/16W
R305	1-216-809-11	METAL CHIP	100	5%	1/16W
R306	1-216-809-11	METAL CHIP	100	5%	1/16W
R307	1-216-809-11	METAL CHIP	100	5%	1/16W
R308	1-216-809-11	METAL CHIP	100	5%	1/16W
R311	1-216-821-11	METAL CHIP	1K	5%	1/16W
R313	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R314	1-216-821-11	METAL CHIP	1K	5%	1/16W
R318	1-216-833-11	RES, CHIP	10K	5%	1/16W
R319	1-216-845-11	METAL CHIP	100K	5%	1/16W
R320	1-216-855-11	METAL CHIP	680K	5%	1/16W
R324	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R325	1-216-821-11	METAL CHIP	1K	5%	1/16W
R327	1-216-821-11	METAL CHIP	1K	5%	1/16W
R328	1-216-811-11	METAL CHIP	150	5%	1/16W
R329	1-216-819-11	METAL CHIP	680	5%	1/16W
R330	1-216-853-11	METAL CHIP	470K	5%	1/16W
R331	1-216-809-11	METAL CHIP	100	5%	1/16W
R332	1-216-809-11	METAL CHIP	100	5%	1/16W
R333	1-216-819-11	METAL CHIP	680	5%	1/16W
R334	1-216-809-11	METAL CHIP	100	5%	1/16W
R335	1-216-815-11	METAL CHIP	330	5%	1/16W
R336	1-216-853-11	METAL CHIP	470K	5%	1/16W
R337	1-216-853-11	METAL CHIP	470K	5%	1/16W
R338	1-216-833-11	RES, CHIP	10K	5%	1/16W
R339	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R340	1-216-843-11	METAL CHIP	68K	5%	1/16W
R341	1-216-837-11	METAL CHIP	22K	5%	1/16W
R342	1-216-833-11	RES, CHIP	10K	5%	1/16W
R343	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R344	1-216-833-11	RES, CHIP	10K	5%	1/16W
R345	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R346	1-216-841-11	METAL CHIP	47K	5%	1/16W
R347	1-216-833-11	RES, CHIP	10K	5%	1/16W
R348	1-218-708-11	METAL CHIP	4.7K	0.5%	1/16W
R349	1-216-025-00	RES, CHIP	100	5%	1/10W
R350	1-216-142-00	RES, CHIP	4.7	5%	1/8W
R351	1-218-700-11	METAL CHIP	2.2K	0.5%	1/16W
R352	1-218-700-11	METAL CHIP	2.2K	0.5%	1/16W
R353	1-218-700-11	METAL CHIP	2.2K	0.5%	1/16W
R354	1-216-857-11	METAL CHIP	1M	5%	1/16W
R355	1-216-833-11	RES, CHIP	10K	5%	1/16W
R356	1-216-833-11	RES, CHIP	10K	5%	1/16W
R357	1-216-017-00	RES, CHIP	47	5%	1/10W
R358	1-216-864-11	METAL CHIP	0	5%	1/16W
R401	1-216-073-00	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R402	1-216-065-00	RES, CHIP	4.7K	5%	1/10W
R403	1-216-065-00	RES, CHIP	4.7K	5%	1/10W
R404	1-216-809-11	METAL CHIP	100	5%	1/16W
R405	1-218-692-11	METAL CHIP	1K	0.5%	1/16W
R406	1-218-714-11	METAL CHIP	8.2K	0.5%	1/16W
R501	1-216-821-11	METAL CHIP	1K	5%	1/16W
R502	1-216-821-11	METAL CHIP	1K	5%	1/16W
R503	1-216-821-11	METAL CHIP	1K	5%	1/16W
R504	1-216-821-11	METAL CHIP	1K	5%	1/16W
R505	1-216-821-11	METAL CHIP	1K	5%	1/16W
R506	1-216-845-11	METAL CHIP	100K	5%	1/16W
R507	1-218-708-11	METAL CHIP	4.7K	0.5%	1/16W
R510	1-216-864-11	METAL CHIP	0	5%	1/16W
R511	1-216-845-11	METAL CHIP	100K	5%	1/16W
R512	1-216-847-11	METAL CHIP	150K	5%	1/16W
R516	1-216-809-11	METAL CHIP	100	5%	1/16W
R517	1-216-809-11	METAL CHIP	100	5%	1/16W
R518	1-216-809-11	METAL CHIP	100	5%	1/16W
R519	1-216-809-11	METAL CHIP	100	5%	1/16W
R520	1-216-809-11	METAL CHIP	100	5%	1/16W
R521	1-216-809-11	METAL CHIP	100	5%	1/16W
R522	1-216-821-11	METAL CHIP	1K	5%	1/16W
R523	1-216-821-11	METAL CHIP	1K	5%	1/16W
R524	1-216-821-11	METAL CHIP	1K	5%	1/16W
R525	1-216-845-11	METAL CHIP	100K	5%	1/16W
R526	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R527	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R528	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R529	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R531	1-216-845-11	METAL CHIP	100K	5%	1/16W
R532	1-216-864-11	METAL CHIP	0	5%	1/16W
R533	1-216-845-11	METAL CHIP	100K	5%	1/16W
R534	1-216-845-11	METAL CHIP	100K	5%	1/16W
R535	1-216-845-11	METAL CHIP	100K	5%	1/16W
R536	1-216-864-11	METAL CHIP	0	5%	1/16W
R537	1-216-809-11	METAL CHIP	100	5%	1/16W
R538	1-216-845-11	METAL CHIP	100K	5%	1/16W
R539	1-216-845-11	METAL CHIP	100K	5%	1/16W
R540	1-216-845-11	METAL CHIP	100K	5%	1/16W
R542	1-216-845-11	METAL CHIP	100K	5%	1/16W
R547	1-216-864-11	METAL CHIP	0	5%	1/16W
		< COMPOSITION CIRCUIT BLOCK >			
RB301	1-233-576-11	RES, CHIP NETWORK 100			
RB302	1-233-576-11	RES, CHIP NETWORK 100			
RB503	1-233-412-11	RES, CHIP NETWORK 1K (3216)			
		< THERMISTOR >			
TH501	1-810-421-11	THERMISTOR NTH5G36B103K01TE			
		< VIBRATOR >			
X501	1-760-365-11	VIBRATOR, CERAMIC (10MHz)			

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Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		**********	
9	1-674-594-11	FLEXIBLE BOARD	
20	1-791-457-11	CORD (WITH CONNECTOR) (POWER)	
21	1-790-355-21	CORD (WITH CONNECTOR) (RCA)	
23	1-777-246-21	CORD (WITH CONNECTOR) (ANT)	
64	1-694-414-11	CONDUCTOR BOARD, CONNECTION (RUBBER CONNECTOR)	
153	1-654-693-11	SENSOR FLEXIBLE BOARD	
⚠165	8-583-046-05	OPTICAL PICK-UP KMS-241B/J1RP	
F1	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A)	
LCD900	1-803-633-11	DISPLAY PANEL, LIQUID CRYSTAL	
M901	A-3301-407-A	MOTOR ASSY, SP (SPINDLE)	
M902	A-3291-190-A	MOTOR ASSY, SL (SLED)	
M903	A-3291-191-A	MOTOR ASSY, LO (LOADING)	

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		**********	
		HARDWARE LIST	
		**********	
#1	7-621-772-20	SCREW +B 2X5	
#2	7-685-792-09	SCREW +PTT 2.6X6 (S)	
#4	7-685-794-09	SCREW +PTT 2.6X10 (S)	
#5	7-685-851-04	SCREW +BVTT 2X4 (S)	
#6	7-624-102-04	STOP RING 1.5, TYPE -E	
#7	7-627-852-37	PRECISION SCREW +P 1.7X1.8 TYPE3	
#8	7-621-772-08	SCREW +B 2X3	
#9	7-621-555-10	SCREW +K 2X3	
#11	7-685-105-19	SCREW +P 2X8 TYPE2 NON-SLIT	

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		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-475-951-11	REMOTE COMMANDER (RM-X4V)	
	3-023-882-01	LABEL (V M) (for RM-X4V)	
	3-866-748-11	MANUAL, INSTRUCTION (ENGLISH)	
	3-866-750-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH)	
	X-3373-926-1	CASE ASSY (XR) (for FRONT PANEL)	

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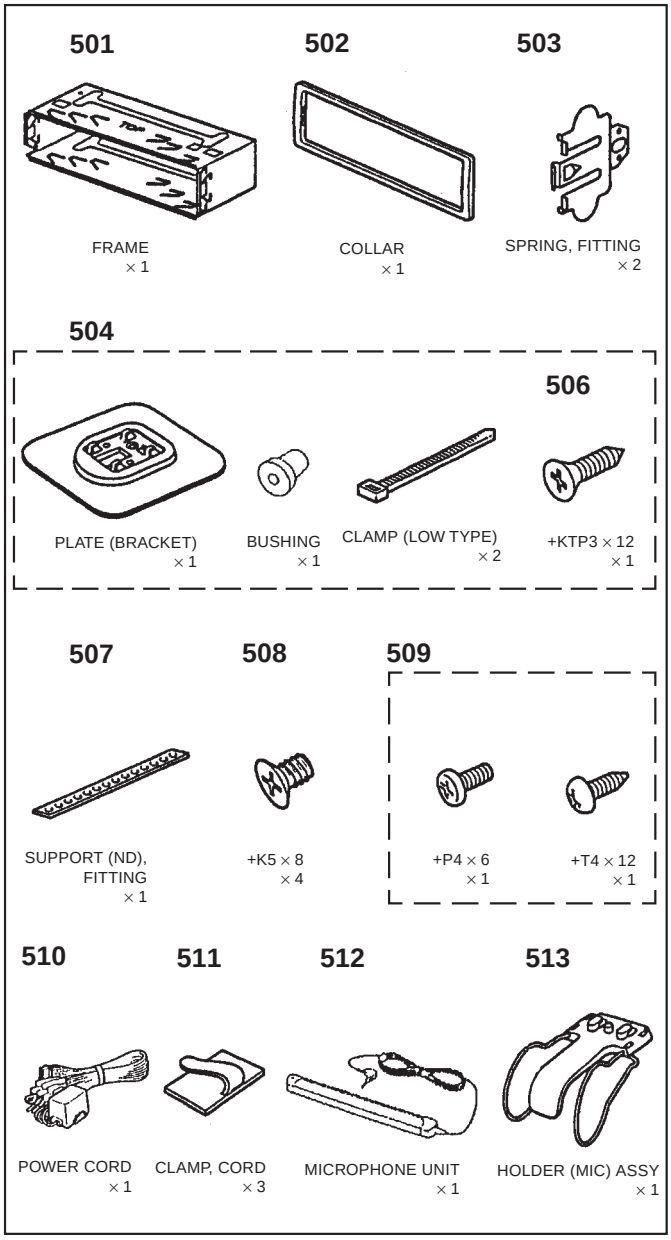
Ref. No.	Part No.	Description	Remark
		PARTS FOR INTALLATION AND CONNECTIONS	
		**********	
501	3-009-613-21	FRAME	
502	3-022-310-01	COLLAR	
503	3-027-138-01	SPRING, FITTING	
504	X-3373-432-1	BRACKET ASSY (for RM-X4V)	
506	7-685-248-14	SCREW +KTP 3X12 TYPE4 (for RM-X4V)	
507	3-924-961-01	SUPPORT (ND), FITTING	
508	3-934-325-01	SCREW, +K (5X8) TAPPING	
509	X-3368-725-1	SCREW ASSY, FITTING	
510	1-791-457-11	CORD (WITH CONNECTOR) (POWER)	
511	3-389-594-11	CLAMP, CORD	
512	1-475-982-11	UNIT (MICROPHONE)	
513	X-3375-861-2	HOLDER (MIC) ASSY	



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

9-926-584-11

Sony Corporation
Mobile Electronics Company

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